
GUIDELINES

FOR THE

CLASSIFICATION

AND

CODING

OF

INDUSTRIAL

AND

HAZARDOUS WASTES



TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY
WASTE PERMITS DIVISION

RG-022 Revised 2/05

GUIDELINES FOR THE CLASSIFICATION AND CODING OF INDUSTRIAL AND HAZARDOUS WASTES

**THIS IS A GUIDANCE DOCUMENT AND SHOULD NOT BE
INTERPRETED AS A REPLACEMENT TO THE RULES.**

The rules for classifying and coding industrial wastes and hazardous wastes may be found in 30 Texas Administrative Code (TAC) Sections (§§) 335.501-.521 (Subchapter R).

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Introduction

Who Should Read This Booklet

The main purpose of this guidance document is to help generators of industrial and hazardous waste follow state and federal requirements on

- classifying and coding these wastes,
- keeping proper records, and
- notifying the Texas Commission on Environmental Quality (TCEQ) about the wastes, when required.

Specifically, this document gives guidance on the regulations in Title 30 of the Texas Administrative Code (TAC), Chapter 335, Subchapter R (Waste Classification). The rules in Subchapter R apply both to wastes generated in Texas and to those generated outside the state and sent to Texas for treatment, storage, and/or disposal. Correct and timely compliance with the regulations on industrial and hazardous wastes helps to protect the state's environment and safeguard the health of Texas citizens.

Waste Classes

Figure 1 shows the main categories of hazardous and nonhazardous waste. The following paragraphs give brief descriptions of these categories—important terms that will be used throughout this booklet. (For more details, see the classification checklist in Chapter 3 and the definitions in Chapter 8.)

Hazardous Waste

A hazardous waste is one that is listed as such by the U.S. Environmental Protection Agency (EPA) or that exhibits one or more hazardous characteristics (also as specified by the EPA). Hazardous wastes are threatening to human health and the environment.

Listed Hazardous Waste

EPA lists over 400 wastes as hazardous. For more information see Part I-A of the checklist in Chapter 3.

Characteristically Hazardous Waste

Waste that displays one or more of four hazardous characteristics:

- **ignitability** (easily flammable—for example, solvents);
- **reactivity** (capable of rapid chemical reaction—for example, peroxides);
- **corrosivity** (highly acidic or alkaline, able to dissolve metals or burn the skin—for example, hydrochloric acid or sodium hydroxide); and
- **toxicity** (a waste that can release toxic constituents into the environment—for example, lead-based paint).

For more information on hazardous characteristics, see Part I-B of the checklist in Chapter 3.

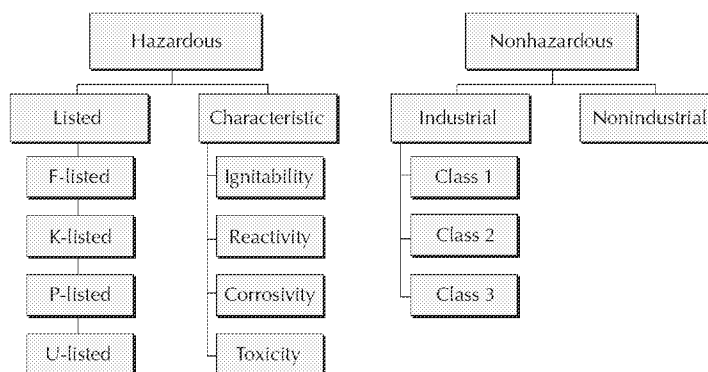
Nonhazardous Waste

Any industrial waste that is not listed as hazardous and does not have hazardous characteristics. (Class 1 nonhazardous industrial waste can include certain levels of constituents and specified properties that, at higher levels, might otherwise render the waste hazardous—see Part II of the checklist in Chapter 3.)

Industrial versus Nonindustrial Wastes

Industrial wastes result from (or are incidental to) operations of industry, manufacturing, mining, or agriculture—for example, wastes from power generation plants, manufacturing facilities, and laboratories serving an industry. *Nonindustrial wastes*, by contrast, come from sources such as schools, hospitals, churches, dry cleaners, most service stations, and laboratories serving the public.

Figure 1. Hazardous and Nonhazardous Wastes



Nonhazardous Industrial Waste

In this grouping, *Class 1* waste is considered potentially threatening to human health and the environment if not properly managed, because of the constituents and properties this class can include. Therefore, there are special handling requirements for Class 1 wastes. An example is water contaminated with ethylene glycol.

Examples of *Class 2* wastes include waste-activated sludge from biological wastewater treatment. *Class 3* includes materials such as demolition debris—for example, bricks—that are insoluble, do not react with other materials, and do not decompose. Class 2 and 3 wastes are often accepted by local landfills. However, a Class 2 or 3 designation does not mean that the waste is incapable of causing harm in every management (or mismanagement) situation.

What This Booklet Explains How to Do

After you have worked through this booklet (and that includes consulting the rules referred to in it), you will be able to accomplish the following tasks:

- **Identify which wastes you must classify, code, and notify** the TCEQ about. Chapter 2 introduces a key concept—"waste streams"—that helps you decide these points.
- **Classify your waste.** Chapter 3 gives you a step-by-step approach for putting your waste into one of four categories: either *hazardous* waste or *nonhazardous* industrial waste Classes 1, 2, or 3.
- Know what kind of information (either from **process knowledge** about your facility's operation or from **analytical testing**) that you must **document** and keep on **file** (Chapter 4).
- **Understand the 8-character Texas waste code.** Chapter 5 explains the components of the waste code:
 - ▼ 4-character **sequence number** (may be a number, letters, or a combination; generally, identifies a particular waste or where it came from);
 - ▼ 3-digit **form** code; and
 - ▼ 1-character classification (from Chapter 3).
- **Know how to notify TCEQ** about your wastes and **which TCEQ form** to use (Chapter 6).

Some Things This Booklet Does NOT Cover

Nonhazardous Nonindustrial Waste. The rules in 30 TAC Chapter 335, *do NOT* apply to **nonhazardous** waste generated by **nonindustrial** facilities.

Selective Coverage of Chapter 335

Also, please be aware that this guidance document only covers 2 subchapters (A and R) of 30 TAC Chapter 335, which contains 18 subchapters in all. This booklet covers only classification and coding, documentation you must create and keep on file, and notifications you must send to TCEQ (and the forms to use for that purpose). This booklet is not a substitute for the complete rules themselves. (You can obtain your own copies of the full, official state rules from the TCEQ's publications unit. Ways to contact this unit are listed under the heading "TCEQ and EPA Forms" in Chapter 6.)

Classification versus Risk Reduction

There is an important distinction between (1) classifying your wastes; and (2) meeting the **risk reduction standards**, which are set forth in 30 TAC Chapter 335, Subchapter S. Here are the most common situations where the risk reduction standards apply:

- a facility that handled industrial wastes is being closed;
- a site where unauthorized discharge of wastes occurred is being cleaned up.

If you are involved in a situation like these, you need to inform yourself about the risk reduction standards. The guidance document you are now reading does not cover this topic. (Again, you can obtain a copy of Subchapter S, and other information, from the TCEQ publications unit— see the heading "TCEQ and EPA Forms" in Chapter 6.)

Who Are "You" in This Booklet?

Throughout this guidance document, generators of industrial and/or hazardous wastes will be referred to as "generator," "generators," or—for a more direct way of writing—simply as "you." Also, 30 TAC Chapter 335, Subchapter R, will be referred to as "these rules" or "the rules." Finally, "this booklet," "this document," or "this guidance document" refers to *Guidelines for the Classification and Coding of Industrial and Hazardous Wastes*, TCEQ Publication Number RG-022—the booklet you are now reading.

“Waste Streams”—A Key Concept

When the preceding chapter mentioned that this booklet will instruct you on how to classify, code and report about wastes, a question that naturally might have come to your mind is “*How* do I know which wastes must be classified, coded, and reported?” (The general answer is that you must perform these processes on all hazardous wastes and nonhazardous industrial wastes.)

In discussing this point, federal regulators use the term *waste stream*, in both of the following senses: First, it can mean the total flow of all waste from homes, businesses, and industry. Second, within this total flow, smaller “waste streams” can be distinguished—for example, “the residential waste stream,” “the recyclable waste stream,” and others.

Similarly, within the overall flow of waste from your ordinary operations or processes, a number of particular waste streams can be identified. For example if your process ordinarily produces a hazardous acidic waste, and at some point you neutralize that waste, these are two separately identifiable “waste streams.”

Each waste stream—the acidic waste and the neutralized waste, in this example—must be identified by an 8-character Texas waste code, which identifies the waste stream as a separate entity and gives information about its origin, general nature, and hazardous status. (Chapters 3 through 5 go into the details of how this 8-character code is arrived at.)

Table 2-1 gives examples of some situations in which the waste flow from an operation or process can produce more than one waste stream, each of which must be classified and coded; and an example of a situation that does *not* result in more than one waste stream. For specific guidance on specific waste streams, contact the TCEQ.

In general, whenever you have or suspect the existence of an additional, distinct waste stream, you must determine its classification (Chapter 3), arrive at a Texas waste code for it (Chapter 5), and in most cases notify TCEQ about the additional waste stream (Chapter 6—which also gives details about some of the exceptions to the requirements for notification: for example, a slight change or variation in a waste stream’s composition may not require notification.)

Table 2-1. An Operation’s Overall Waste Flow Can Produce Multiple “Waste Streams”

| IF you have WASTES that are ... | AND they come from PROCESSES that are ... | THEN the wastes are considered ... |
|---|---|---|
| different | similar | different “waste streams”—for example, a sludge removed from an electroplating vat is not the same waste stream as a liquid removed from an electroplating vat. |
| similar | different | different “waste streams”—for example, methylene chloride used in a paint-stripping operation is not the same waste stream as methylene chloride used in laboratory analysis. |
| similar | similar | the same “waste stream”—for example, a site may have several paint booths that perform the same activities with the same materials, and each produces drop cloth waste. These drop cloth wastes, from the various locations at this site, could be considered one waste stream as long as they were all classified the same (for more on classification, see Chapter 3). |
| altered physically or chemically by treatment | N/A | different “waste streams”—for example, if a sludge is dewatered, it may produce two new waste streams, one a solid and the other a liquid. |

Waste Classification Checklist

This chapter provides a checklist to help you classify your hazardous waste and your nonhazardous industrial waste. For an overview of these types of waste, refer back to Figure 1 in Chapter 1; for more details, refer to 30 TAC Chapter 335 Subchapter R Sections 335.501–508. (You can obtain your own copy of state rules from the TCEQ publications unit; ways to contact this unit are listed under the heading “TCEQ and EPA Forms” in Chapter 6.)

Process Knowledge vs. Analytical Testing

In determining a waste stream’s classification, a generator may use *process knowledge* and/or *analytical testing*. Process knowledge is the owner or operator’s knowledge about how the facility operates, how a waste was produced and handled, and other information based on operating experience. Analytical testing is information about a waste from laboratory analysis.

In the checklist, the nonhazardous classification criteria that could involve analytical testing have been marked with an *. This marking **does not** mean that analytical testing is the only way to evaluate these criteria. If sufficient process knowledge is available, little or no analysis may need to be performed. You should evaluate whether you have enough process knowledge about the waste to classify it or whether analytical testing is needed.

Documentation

Regardless of whether you rely on process knowledge or opt for analytical testing, you must fully document the information used in making your waste classification. **A completed checklist does not qualify as full documentation.** Documentation should be in a written and/or electronically stored format that is reasonably accessible and easily reproducible. For details on documentation requirements, see Chapter 4.

Part I. Hazardous Waste Determination

All waste generators should work through Part I of this checklist. In this part you will determine whether your waste is hazardous because (a) it is listed as hazardous by EPA or (b) it displays characteristics that EPA says make it hazardous.

In federal regulatory language, the first step in classifying your waste is called “making a *hazardous waste determination*.” The definition of hazardous waste, based upon the Resource Conservation and Recovery Act (RCRA), is found in Title 40 of the Code of Federal Regulations (CFR), Part 261.

This TCEQ guidance document reflects the hazardous waste definition in the *Federal Register* as of July 1, 2004. If that definition changes, the generator is still responsible for making an accurate hazardous waste determination in accordance with the latest regulations—instead of with what is printed in this guidance document.

IF the answer to any of the questions in Part I is “Yes,”
THEN the waste is hazardous.

Possible Exclusions from Hazardous Classification

Under certain conditions, some types of wastes are excluded from being considered hazardous (40 CFR Sections 261.3–4). Generators may wish to review these exclusions before working through Part I of this checklist.

Part I-A. *Listed* Hazardous Waste Determination

The EPA lists some 400 hazardous wastes.

Information to Help You Make This Determination

Descriptions of listed waste are found in 40 CFR Part 261, Subpart D, Sections 261.31–33. These wastes are often referred to as follows:

- “F” listed waste (waste from nonspecific sources, Section 261.31);
- “K” listed waste (wastes from specific sources, Section 261.32);
- “P” listed waste (unused acutely hazardous off-specification materials as well as container residues and spill residues of these materials, Section 261.33);
- “U” listed waste (unused toxic hazardous off-specification materials as well as container residues and spill residues of these materials, Section 261.33).

QUESTION: Is the waste a listed hazardous waste, or is it mixed with or derived from one? Yes No

Part I-B. *Characteristic* Hazardous Waste Determination

Wastes may be hazardous if they display any of four characteristics: ignitability, corrosiveness, reactivity, or toxicity.

Information to Help You Make This Determination

Ignitability

Wastes that are hazardous because they may ignite include the following:

- Liquid wastes (other than those aqueous waste containing less than 24 percent alcohol by volume) that have a flash point less than 60°C (140°F). (The test method is the Pensky-Martens closed cup tester, using the test method specified in ASTM Standard D-93-79 or D-93-80, or a Setaflash closed cup tester, using the test method specified in ASTM Standard D-3278-78.)
- Nonliquid wastes that, under standard temperature and pressure, are capable of causing fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burn so vigorously and persistently that they create a hazard.
- Wastes that meet the definition of an ignitable compressed gas (see 49 CFR Section 173.300).
- Wastes that meet the definition of an oxidizer (see 49 CFR Section 173.151).

QUESTION: Is the waste ignitable according to 40 CFR Section 261.21? Yes No

Corrosiveness

Wastes that are hazardous because they are corrosive include the following:

- aqueous wastes with a pH of 2 units or below or of 12.5 units or above;
- liquid wastes that corrode steel at a rate greater than 6.35 mm (0.250 inches) per year.

QUESTION: Is the waste corrosive according to 40 CFR Section 261.22? Yes No

Reactivity

A waste is considered reactive if it meets any of the following conditions:

- It is capable of detonation or explosive decomposition or reaction
 - ▼ at standard temperature and pressure,
 - ▼ if subjected to a strong ignition source, or
 - ▼ if heated under confinement.
- When mixed with water, it is
 - ▼ potentially explosive,
 - ▼ reacts violently, or
 - ▼ generates toxic gases or vapors.
- If a cyanide or sulfide-bearing waste is exposed to pH conditions between 2 and 12.5, it can generate enough toxic gases, vapors, or fumes to present a danger to human health or the environment. Generally, if a waste generates **250 ppm** or more of reactive cyanides or **500 ppm** or more of reactive sulfides, it is considered a reactive waste. (It should be noted that these levels of reactive compounds are just guidance. Each waste must be evaluated for reactivity on a case-by-case basis).
- It is normally unstable and readily undergoes violent change without detonating.
- It is a forbidden explosive (as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53).
- It is a Class B explosive (see 49 CFR Section 173.88).

QUESTION: Is the waste reactive according to 40 CFR Section 261.23?

Yes No

Toxicity

A waste is toxic if the toxicity characteristic leaching procedure (TCLP) shows that a representative sample from the waste contains one or more constituents at or above the levels listed in Table 3-1. The TCLP is described in EPA Method 1311 (SW-846).

QUESTION: Is the waste toxic according to 40 CFR Section 261.24?

Yes No

Table 3-1. TCLP Regulatory Levels

| | | |
|---------------------------------|---|------------------------------------|
| arsenic — 5.0 mg/l | 1,4-dichlorobenzene — 7.5 mg/l | nitrobenzene — 2.0 mg/l |
| barium — 100.0 mg/l | 1,2-dichloroethane — 0.5 mg/l | pentachlorophenol — 100.0 mg/l |
| benzene — 0.5 mg/l | 1,1-dichloroethylene — 0.7 mg/l | pyridine — 5.0 mg/l |
| cadmium — 1.0 mg/l | 2,4-dinitrotoluene — 0.13 mg/l | selenium — 1.0 mg/l |
| carbon tetrachloride — 0.5 mg/l | endrin — 0.02 mg/l | silver — 5.0 mg/l |
| chlordane — 0.03 mg/l | heptachlor (and its epoxide) — 0.008 mg/l | tetrachloroethylene — 0.7 mg/l |
| chlorobenzene — 100.0 mg/l | hexachlorobenzene — 0.13 mg/l | toxaphene — 0.5 mg/l |
| chloroform — 6.0 mg/l | hexachlorobutadiene — 0.5 mg/l | trichloroethylene — 0.5 mg/l |
| chromium — 5.0 mg/l | hexachloroethane — 3.0 mg/l | 2,4,5-trichlorophenol — 400.0 mg/l |
| o-cresol — 200.0 mg/l | lead — 5.0 mg/l | 2,4,6-trichlorophenol — 2.0 mg/l |
| m-cresol — 200.0 mg/l | lindane — 0.4 mg/l | 2,4,5-TP (Silvex) — 1.0 mg/l |
| p-cresol — 200.0 mg/l | mercury — 0.2 mg/l | vinyl chloride — 0.2 mg/l |
| cresol — 200.0 mg/l | methoxychlor — 10.0 mg/l | |
| 2,4-D — 10.0 mg/l | methyl ethyl ketone — 200.0 mg/l | |

Review of Checklist Part I—Hazardous Waste

IF the answer to any of the preceding questions in Part I is “Yes,”
THEN the waste is HAZARDOUS; PROCEED to Chapter 4.

IF the answers are “No” to all the preceding questions,
AND the waste is NONINDUSTRIAL,
THEN STOP here.

IF the answers are “No” to all of the preceding questions,
AND the waste is INDUSTRIAL,
THEN PROCEED to Part II.

Part II: Nonhazardous Industrial Waste Classes 1 & 2

The determination in this part of the checklist applies only to nonhazardous industrial waste—see figure 1 in Chapter 1. (This part of the checklist is based on regulations found in 30 TAC Sections 335.505–06 and 335.508).

IF the answer to any of the **un-numbered** questions
in this part of the checklist is “Yes,”
THEN the nonhazardous industrial waste is a Class 1 waste.

IF all the answers to the **un-numbered** questions in this part are “No,”
THEN the industrial waste is a Class 2 waste.

Generator’s Self-Classification

| | | |
|---|-----|----|
| QUESTION: Has the generator chosen to classify its nonhazardous waste as Class 1? | Yes | No |
|---|-----|----|

Container Waste

IF the waste is a container, greater than 5 gallons
in holding capacity, which has held

- ▼ a hazardous substance (as defined in 40 CFR Part 302
and listed in Appendix A of this guidance document),
- ▼ a hazardous waste (including acutely hazardous wastes),
- ▼ a Class 1 waste, and/or
- ▼ a material that would be classified as a hazardous or
Class 1 waste if disposed of,

THEN answer questions 1 and 2. *(Please note that containers that have held acutely hazardous wastes must be triple-rinsed before they can be classified as empty).*

IF these conditions are not present in your situation,
THEN proceed to the next un-numbered question.

- | | | |
|--|-----|----|
| 1. Has the container had all its residues removed? | Yes | No |
| 2. Has the container been rendered unusable? | Yes | No |

| | | |
|---|-----|----|
| QUESTION: Are <i>any</i> of the answers to questions (1) or (2) above “NO”? | Yes | No |
|---|-----|----|

Regulated Asbestos-Containing Material (RACM)

(See Chapter 8, Definition of Terms, for information on RACM.)

QUESTION: Does the waste contain asbestos material identified as RACM, as defined in 40 CFR Part 61? *

Yes No

Polychlorinated Biphenyls (PCBs)

QUESTION: Is the waste contaminated by a material that originally contained 50 or more parts per million (ppm) total PCBs? *

Yes No

QUESTION: Does the waste contain 50 or more ppm PCBs?*

Yes No

Petroleum Substance Waste

1. Is your waste specifically identified as a *petroleum substance* (see Chapter 8, Definitions of Terms) or contaminated with a material identified as a petroleum substance waste?

Yes No

2. Does the waste contain more than 1,500 ppm total petroleum hydrocarbons (TPH)?

Yes No

QUESTION: Are the answers to **both** of the numbered questions above “Yes”?
(If one or both of the answers are “No,” enter “No” for this question.)

Yes No

“New Chemical Substance”

See “new chemical substances wastes” in Chapter 8, Definitions and Terms, for a description of how this particular type of waste may be classified as Class 2 or 3.

QUESTION: Is the waste from the production of a “new chemical substance,” as defined by the federal Toxic Substances Control Act, 15 U.S.C.A. Section 2602(9)?

Yes No

Out-of-State Origin

See “wastes generated out-of-state” in Chapter 8, Definitions of Terms, for details on how this particular type of waste may be classified as Class 2 or 3.

QUESTION: Is the waste generated outside Texas?

Yes No

Constituent Levels and Specified Properties for Nonhazardous Industrial Class 1 Wastes

QUESTION: If the waste is a liquid, does it have a flash point of less than 65.6°C (150°F)? *

Yes No

QUESTION: Is the waste a solid or semi-solid that—under conditions normally encountered in storage, transportation, and disposal—

- is liable to cause fires through friction or through retained heat from manufacturing or processing; or
- can be ignited readily, and when ignited burns so vigorously and persistently as to create a serious hazard?

Yes No

QUESTION: Is the waste a semi-solid or solid that, when mixed with an equivalent weight of ASTM Type II laboratory distilled or deionized water, produces a solution with a pH of 2 or less or 12.5 or more?

Yes No

(Exception: for solidified, stabilized, encapsulated, or otherwise chemically bound wastes, an exception is provided in 30 TAC Section 335.505(3)) *

QUESTION: Does the waste leach Class 1 toxic constituents at or above the levels listed in Table 1, Appendix 1 of 30 TAC Chapter 335 Subchapter R when submitted to the toxicity characteristic leaching procedure (TCLP)? *

Yes No

(For a copy of Table 1, Appendix 1, see Appendix C of this guidance document.)

(Where matrix interferences of the waste cause the Practical Quantitation Limit (PQL) of the specific analysis to be greater than the Maximum Concentration listed in Table 1, Appendix 1 of 30 TAC Chapter 335 Subchapter R, then the achievable PQL becomes the Maximum Concentration, provided that the generator maintains documentation that satisfactorily demonstrates to the TCEQ that lower levels of quantitation of a sample are not possible.)

A satisfactory demonstration includes the results from the analysis of the waste for that specific constituent by a laboratory using an appropriate method found in *Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods* (EPA SW-846); *Methods or Chemical Analysis of Water and Wastes* (EPA-600 series); *Standard Methods for the Examination of Water and Wastewater*; *American Society for Testing and Materials (ASTM) Standard Methods*; or an equivalent method approved by the TCEQ.

Lack of Class 2 or 3 Information

QUESTION: Is information lacking that demonstrates the waste belongs in Class 2 or 3?

Yes No

Review of Checklist Part II: Class 1 or 2 Nonhazardous Industrial Waste

IF the answer to any of the preceding
 un-numbered questions in Part II is "Yes,"
 THEN the nonhazardous industrial waste is a Class 1 waste.
 PROCEED to Chapter 4.

IF the answers are "No" to all the preceding
 un-numbered questions in Part II,
 THEN the industrial waste is a Class 2 waste.
 PROCEED to Chapter 4.

IF the answers are "No" to all of the preceding
 un-numbered questions in Part II,
 AND the industrial generator wishes to evaluate
 the waste for a possible Class 3 status,
 THEN PROCEED to Part III.

Part III: Nonhazardous Industrial Class 3 Waste

This part of the checklist applies only to nonhazardous, industrial waste that does not meet the definition of a Class 1 waste and is not specifically identified as a Class 2 waste. (The corresponding regulations for this part of the checklist can be found in 30 TAC Sections 335.507 and 335.508.)

Part III-A. Initial Determinations for Class 3 Status

IF the answer to any of the following questions in Part III-A is "Yes,"
THEN the nonhazardous, industrial waste **cannot** be considered a Class 3 waste.

Containers

QUESTION: Is the waste an empty container? Yes No

Medical Waste

(For a definition, see "medical wastes" in Chapter 8.)

QUESTION: Is the waste a medical waste regulated under 30 TAC Chapter 330, Subchapter Y? Yes No

Distilled Water Leaching Test

QUESTION: When subjected to the 7-day distilled water leaching test, does the waste leach constituents at or above the maximum contaminant levels listed in Table 3, Appendix 1 of 30 TAC Chapter 335, Subchapter R? *

Yes No

(Table 3 is reproduced in Appendix D of this guidance document.)

Toxicity Characteristic Leaching Procedure

QUESTION: When submitted to the toxicity characteristic leaching procedure (TCLP), does the waste leach Class 1 toxic constituents listed in Table 1, Appendix 1 of 30 TAC Chapter 335 Subchapter R at or above their detection levels? *

Yes No

(The list of Class 1 toxic constituents is reproduced in Appendix E of this guidance document.)

Exclusion: Excluded from this list of Class 1 toxic constituents are those addressed in the previous question (that is, constituents identified in Table 3, Appendix 1 of 30 TAC Chapter 335 Subchapter R).

Petroleum Hydrocarbons

QUESTION: Does the waste contain detectable levels of petroleum hydrocarbons (Method 1005)? *

Yes No

Polychlorinated Biphenyls (PCBs)

QUESTION: Does the waste contain detectable levels of PCBs? *

Yes No

Decomposition

QUESTION: Is the waste readily decomposable?

Yes No

Review of Checklist Part III-A: Class 3 Nonhazardous Industrial Waste

IF the answer to any of the preceding questions in Part III-A is "Yes,"
THEN the nonhazardous, industrial waste **cannot** be considered a Class 3 waste.

IF all the answers to the preceding questions in Part III-A are "No,"
THEN proceed to Part III-B to continue the waste's evaluation for possible Class 3 status.

Part III-B: Final Determinations for Class 3 Status

Inertness

QUESTION: Is the waste inert? (Inertness refers to chemical inactivity of an element, a compound, or a waste.)

Yes No

Insolubility

QUESTION: Is the waste essentially insoluble?
(*Note:* wastes that contain liquids are *NOT* considered insoluble.)

Yes No

Review of Checklist Part III

IF the answer to any question under Part III-B is "No,"
THEN the nonhazardous, industrial waste **cannot** be considered a Class 3 waste.

IF all the answers to the questions in Part III-A are "No,"
AND all the answers to the questions in Part III-B are "YES,"
THEN the nonhazardous industrial waste is a Class 3 waste.

Part IV. Variance from Waste Classification

The TCEQ may determine, on a case-by-case basis, the merits of a variance request for a specific nonhazardous classification. The burden of justifying the need for a variance is on the requestor. The requestor must submit information sufficient to clearly indicate the issues involved, the reason(s) for the request, and both the positive and negative impacts that may result from the granting of the variance. (The regulations corresponding to these types of variance requests can be found in 30 TAC Section 335.514, Variance from Waste Classification Provisions.)

* **As a reminder**, these characteristics need not necessarily be addressed by analytical testing. A generator may be able to address them through process knowledge. For more information on process knowledge, please see Chapter 4 of this guidance document.

Process Knowledge, Analytical Testing, and Documentation Requirements

Introduction

Now that you know how to classify your wastes, you are ready to compile supporting documentation. Documentation should support the classification and coding of a waste stream. You must properly document each waste stream generated by the facility, and keep that documentation for at least three years after the waste is no longer generated, stored, or recycled or until the site is closed.

The regulations on documentation requirements can be found in 30 TAC Section 335.9 (Record Keeping and Annual Reporting Procedures Applicable to Generators), Section 335.70 (Record Keeping), Section 335.510 (Sampling Documentation), Section 335.511 (Use of Process Knowledge), and Section 335.513 (Documentation Required).

The TCEQ randomly audits a portion of waste stream *notifications* (see Chapter 6) in order to ensure proper classification and coding of waste in Texas. When the TCEQ sends you a request for information for the purpose of an audit, you must send the agency the information that you have gathered to make your hazardous waste determination/waste classification. Please use Chapter 4 as a guide to compiling supporting documentation for each waste stream generated at your facility.

Process Knowledge

If process knowledge is used in classifying a waste, that knowledge must be documented and kept on file for three years. Process knowledge must be in writing or stored in some electronic form. It cannot be stored solely in someone's mind. The process knowledge must support a generator's reasoning about why the waste has been given a particular classification. It must also support the generator's reasoning about why a particular test method was not performed.

The following are some examples of process knowledge that may assist in classifying waste:

- description of the waste;
- date of initial waste generation;
- a detailed description of the process generating the waste (that is, identification of chemicals or other materials in the process that generated the waste stream (including any potential breakdown products);
- manufacturer's literature such as Material Safety Data Sheets—MSDSs (although they were not created for the purpose of determining Texas waste classification, and do not contain information on all constituents found in a product, MSDSs may be helpful);
- full description of activities that generated the waste stream;
- identification of potential contaminants;
- other documentation generated in conjunction with the particular process.

Analytical Data

If a generator uses analytical data to classify a waste, the data must be supported by documentation of the sampling procedure and the analytical testing. The following lists specify information that must be maintained when analytical data is used for classification purposes.

Sampling Procedures

The following procedure must be documented:

- dates of sample collection;
- description of the site and/or unit from which the sample was taken, including sampling locations;
- the method and equipment used for sampling;
- a description of the sampling techniques, including collection, containerization, and preservation;

- rationale—that is, supporting reasons—for the sampling plan (why the number, type, and location of samples taken accurately represent the waste stream being characterized).

Analytical Testing

Documentation of analytical testing must include the following:

- Analytical **results** (including quality control data).
- Analytical **methods** (including any preparatory methods).
- The **detection limits** for each analysis.
- **Name of laboratory** performing the analysis.
- **Chain of custody**—documentation tracking the condition of the waste containers. For example, were the waste containers and their seal intact or broken upon arrival at the laboratory? Were the containers full, half-full, or empty? Did all the containers arrive at the laboratory or just a partial shipment?
- Documentation that satisfactorily demonstrates that lower levels of *quantitation* are not possible (this is only necessary when the waste media causes the *Estimated Quantitation Limit* (EQL) of a Class 1 toxic constituent (as listed in Appendix E of this guidance document) to be greater than the concentration listed (*matrix interference*)). (Terms in italics are explained in Chapter 8.)

Classification Checklist

Although the checklist in Chapter 3 can be used to help classify industrial and hazardous waste, a generator should support the checklist's "yes" or "no" responses with process knowledge and/or ana-

lytical data. A completed checklist by itself is not sufficient documentation to submit to the TCEQ in response to a random audit of classification.

For example, a generator answers "no" to the question "Is the waste ignitable according to 40 CFR Section 261.21." You can support this response by submitting process knowledge, analytical data, or both. If process knowledge is used, it must be **specific**. A general statement such as "the waste is not ignitable" would not be sufficient.

Instead, you should document specific actions you took and their results, such as (1) reviewed all constituents that may be present in the waste; (2) determined that each constituent present in the waste does not meet the definition of an ignitable waste; and (3) determined that the process generating the waste does not introduce any ignitable characteristics to the waste stream. You should keep copies of your documentation demonstrating that the constituents in the waste stream would not cause the waste to exhibit the characteristic of ignitability.

Rule of Thumb about Documentation

Remember that documentation should demonstrate why a waste has been given a particular classification. Here's a good rule of thumb: if someone else can review your classification documentation, using the published criteria and/or the checklist, and arrive at the same classification you did, then you have probably done a good job of compiling supporting documentation for a waste classification. On the other hand, if someone reviews your classification and still has unanswered questions, then you may want to gather additional documentation (from process knowledge and/or analytical data) to support your classification of that waste stream.

Texas Waste Code Formula

Chapter 5 describes the 8-digit Texas waste code that identifies each of your waste streams. (Part of the information to complete this waste code comes from the waste determination process (described in Chapter 3) and from the documentation you must compile and keep on hand (described in Chapter 4).)

The formula for the Texas waste code is given in Figure 5-1. The rules corresponding to this formula can be found in 30 TAC Section 335.503 (Waste Classification and Waste Coding Required).

Sequence Number

Although called a sequence “number,” this part of the code may contain a mix of numbers and letters—alphanumeric; and sometimes it may consist of letters alone. Various types of 4-digit sequence numbers are used in the Texas waste code.

- An **arbitrary and unique 4-digit number from 0001 to 9999** (no alpha characters), which is assigned by the generator when adding a waste stream to Texas facility’s *Notice of Registration* (see Chapter 6, Notification Requirements). Once assigned to a particular waste stream, a sequence number **cannot be reassigned** to another waste stream. Generators need not sequentially assign sequence numbers to a facility’s waste streams.
- A **4-digit alphanumeric number** assigned by the TCEQ (under the **one-time shipment program**) to wastes generated by unregistered generators within Texas. (Spill waste not managed under the Emergency Response Program may be handled in this manner.)
- **“SPIL”** to be assigned only by the Emergency Response Team of the Field Operations Division for **spill wastes regulated under the Emergency Response Program**.
- **“OUTS”** to be used for wastes generated outside of Texas.
- **“CESQ”** to be used by **municipal hazardous and industrial CESQs** (Conditionally Exempt Small-Quantity Generators).
- **“TSDF”** (treatment, storage, and disposal facilities), to be used by facilities that

(1) receive and consolidate a waste stream with other like waste streams (thus not changing the form or composition of the waste); or
(2) store a received waste without treating or changing its form or composition. This sequence number does not apply to wastes that are treated or altered in some other way. The “TSDF” designation is to be used only by **facilities that store and/or accumulate waste** from more than one site for subsequent shipment to a treatment or disposal facility.

Form Code

The second series of numbers found in the Texas waste code is the “form code.” The list of form codes as well as flowcharts that depict the choosing of a form code can be found in Appendix G.

Form codes are broken down into 10 major categories. They are Lab Packs, Inorganic Liquids, Organic Liquids, Inorganic Solids, Organic Solids, Inorganic Sludges, Organic Sludges, Inorganic Gases, Organic Gases, and Plant Trash. The various form codes and corresponding descriptions can be found under these categories in Appendix G.

In determining a waste stream’s form code, TCEQ recommends that the generator first determine the major category into which the waste stream fits. Then review all the form code descriptions in that category to determine which code or codes best describe your waste stream. From this narrowed-down list, choose a form code for the waste stream.

Classification

The waste stream’s classification completes the Texas waste code. As Figure 5-1 showed, this part of the Texas waste code will be “H” or “1”, “2”, or “3”.

Stop! Are You about to Misclassify a Waste?

Table 5-1 provides additional information about using certain combinations of form and class codes.

Figure 5-1. Components of a Texas Waste Code

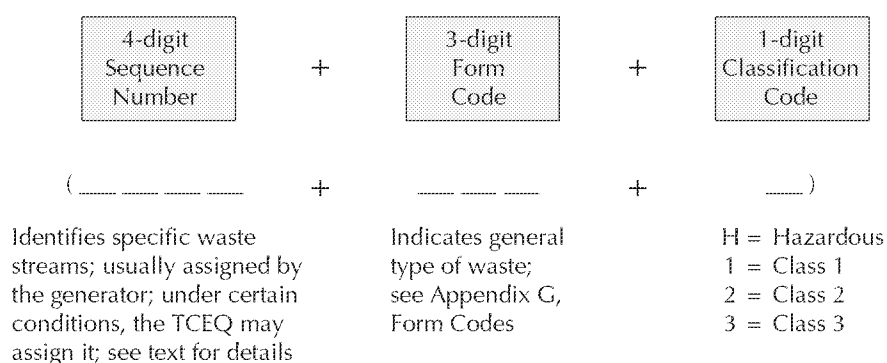


Table 5-1. Questions to Ask about Some Combinations of Coding and Classification

| IF the waste is ... | AND you assigned form codes ... | Are you sure about a classification of ... |
|---|---|---|
| Any Class 3 waste | Any form code | <i>Class 3?</i> (You must submit all supporting documentation) |
| Asbestos solids, debris, slurry, sludge, etc. | 311, 515 | <i>Class 2?</i> (Wastes that contain regulated asbestos-containing material are Class 1) |
| Oils | 205, 206 ^a | <i>Class 2?</i> (Wastes that contain more than 1,500 ppm total petroleum hydrocarbons are Class 1) |
| PCB-containing materials | 297,298,394,395,396,397,398,399,494,495,496,497,498,499,598,599,698,699 | <i>Class 2?</i> (Wastes that contain 50 ppm or more PCBs are Class 1) |
| Petroleum-containing materials | 205,206 ^a ,296,489,510,603,606,695,696 | (Petroleum substance wastes that contain more than 1,500 ppm total petroleum hydrocarbons are Class 1) |
| Plant trash | 902 and 999 ^b | <i>Hazardous, Class 1, or Class 3?</i> (Only wastes that are Class 2 may be given a form code for plant trash) |
| Spent lead acid batteries | 309 ^c | Hazardous |

^aIf your waste oil is nonhazardous, is managed under 40 CFR 279 and 30 TAC 324, and is recycled 100 percent, then do not add to your Notice of Registration (the central record that the TCEQ compiles from waste notifications you send in—see Chapter 6, Notification Requirements and Forms).

^bOnly form codes 902 and 999 may be used.

^cIf all your lead acid batteries are managed under the “universal waste” rule in 40 CFR Part 273, then do not add to your Notice of Registration.

Notification Requirements and Forms

This chapter describes forms and supporting documentation you must send to the TCEQ to notify the agency about waste streams that you generate. The regulations on notification can be found in 30 TAC Section 335.6 (Notification Requirements), Section 335.502 (Conversion to New Waste Notification and Classification System), Section 335.508 (Classification of Specific Industrial Solid Wastes), Section 335.509 (Waste Analysis), and Section 335.513 (Documentation Required).

Notifications about Industrial or Hazardous Waste

You must submit information about industrial or hazardous wastes no later than 90 days after the waste's initial generation and before handling, shipment, or disposal; use TCEQ form 00002 or the TCEQ State of Texas Environmental Electronic Reporting System (STEERS) software. (For information on obtaining TCEQ forms and how to access the STEERS information, see this chapter's section "TCEQ and EPA Forms.")

Please Note: All Large-Quantity Generators (LQG) must use STEERS to update their Notice of Registration (NOR). This requirement, effective December 15, 1997, is found in 30 TAC Section 335.6(b). Therefore, if you are a LQG and you need to update your NOR to replace inactivated waste code, please do so using STEERS.

The TCEQ uses the information submitted on these forms to create a record called the *Notice of Registration*, which contains site-specific waste management information about industrial and municipal hazardous waste generators in Texas.

Notifications about New Chemical Substance Waste

For a Class 2 or Class 3 waste generated as the result of the production of a "new chemical substance" (see Chapter 8, Definitions of Terms), you must follow the instructions below:

- Give the TCEQ notice that the waste is from the production of a "new chemical substance."
- Submit all supporting reasons and documentation used in that waste's classification.
- Manage nonhazardous waste from the production of a "new chemical substance" as a Class 1 waste, unless you can provide appropriate analytical data and/or process knowledge demonstrating that the waste meets the definition of a Class 2 or Class 3, and the TCEQ concurs. (For definitions of Class 2 and 3, see Chapter 8 and the classification checklist in Chapter 3.)
- If you have not received concurrence or denial from the TCEQ within 120 days from the date of your request for review, you may manage the waste according to the requested classification, but you must give the TCEQ 10 working days written notice before managing the waste as a Class 2 or a Class 3.

Notifications about Class 2 and Class 3 Out-of-State Waste

If you want to ship a nonhazardous waste into Texas, it is automatically considered a Class 1 waste (and expected to be managed as such) unless

- you request the TCEQ to review your waste classification documentation supporting a lower classification such as Class 2 or 3; and
- the TCEQ concurs with the lower classification.

After concurrence from the TCEQ you must comply with the lower classification's requirements on shipping, record keeping, and disposal of the waste. If, after review of your documentation, the TCEQ disagrees with your waste classification, you must continue managing the nonhazardous waste as Class 1 waste.

Notifications about Other Industrial and Hazardous Wastes from out of State

Please note the following special requirements for the documentation of industrial and hazardous waste that is imported to Texas from foreign countries and other U.S. states.

- If out-of-state generators and importers of record want to bring hazardous waste into Texas, they must have an EPA Identification number. Generators and importers who do not have this ID number must obtain one from the EPA, using EPA Form 8700-12.
- Out-of-state generators or importers of record must fill out a Uniform Hazardous Waste Manifest (TCEQ-00311) and place their EPA ID number in Box 1 of this form.
- In Box B of the Uniform Hazardous Waste Manifest, use one of the generic numbers for identifying the country or state of origin. For example: F0061 for hazardous and or nonhazardous industrial waste imported from Mexico, D0022 for Louisiana (Appendix H gives these codes). For more information about manifesting imported industrial and hazardous waste, see 40 CFR 262.60 and 30 TAC 335.76 (d).
- OUTS must be used as the 4-digit sequence number of the Texas waste code in Box I of the manifest.

Notifications about Alternate Analytical Methods

Generators who propose an alternate analytical method must validate their alternate method by demonstrating that it is equal to or superior in accuracy, precision, and sensitivity to the corresponding EPA-approved methods for analytical testing given in *Standard Methods for the Examination of Water and Wastewater*, SW-846, EPA-600/4-79/020.

In making this demonstration, the generator must provide the TCEQ, at a minimum, the following documentation:

- a full description of the proposed method (including all equipment and reagents to be used);
- a description of type of waste and *waste matrices* to be analyzed (for definitions of terms in *italics*, see Chapter 8);

- comparative results of the proposed method and corresponding SW-846 or *ASTM* method;
- a complete assessment of interferences with the proposed method (see, for example, *matrix interference* in Chapter 8);
- a description of quality control procedures;
- additional information as needed and/or requested by the TCEQ to adequately review the proposed alternate method.

TCEQ and EPA Forms

How to Order

Notification forms can be obtained in several ways:

- Contact the TCEQ regional office near you.
- On the Internet go to <http://www.tceq.state.tx.us> and select the "Forms & Publications" link. Access the Forms Database and type in the form number. (The instructions for form TCEQ-00002 are in a separate download file).
- Fax your order to 512/239-4488, or order forms by voice at 512/239-0028, the TCEQ's publications unit. Be sure to give the form **numbers** that you want; this information will help the TCEQ get the correct form to you as quickly as possible.

How to Access STEERS

State of Texas Environmental Electronic Reporting System (STEERS) information, including an application package, can be obtained as follows:

- on the Internet, go to <https://www2.tceq.state.tx.us/steers>; or
- call the STEERS Help Line at (512) 239-6925.

Currently Available Forms

Notification forms available at the time of this printing include the following:

- The hazardous or industrial waste **"Initial Notification Form,"** used for initial notification about a site, and adding a waste stream to your Notice of Registration (see chapter 6) or when recording a 6-digit waste code into one or more 8-digit waste codes. (form number: **TCEQ-00002**)
- The **"Hazardous or Industrial Waste Management Unit Form,"** used when adding information about a waste management unit to a Notice of Registration. (form number: **TCEQ-00002**)

- The “**Uniform Hazardous Waste Manifest,**” used by generators and transporters of hazardous waste and by owners or operators of hazardous waste treatment, storage, and disposal facilities for both inter- and intrastate transportation. (form number: **TCEQ-00311**—Only order form available on the Web)
- The “**One-Time Shipment Request ... for Shipment of Class 1, 2, 3 and EPA Hazardous Waste,**” used by unregistered generators,

not by generators that already have a site’s Notice of Registration. (form number: **TCEQ-00757**)

- The EPA “**Notification of Regulated Waste Activity**” form, used when notifying EPA of a federally regulated hazardous waste activity—for example, the generation of hazardous waste. (form number: **EPA 8700-12**—Available on the Web as part of TCEQ-00002)

Management of Mechanical Shredding Wastes

The regulations on mechanical shredding waste can be found in 30 TAC Section 335.508 (Classification of Specific Industrial Solid Wastes).

Wastes generated by the mechanical shredding of automobiles, appliances, or other items of scrap, used, or obsolete metals are handled according to the provisions of the Texas Solid Waste Disposal Act, Health and Safety Code, Section 361.019 (Vernon Pamphlet 1992), until the TCEQ develops specific

standards for the classification of this waste and ensures adequate disposal capacity.

These provisions say that you can dispose of mechanical shredding wastes in a municipal landfill facility authorized to accept Class 1 and 2 industrial solid wastes, if the shredding waste:

- contains no free liquids, and
- is not a hazardous waste.

As mentioned earlier, TCEQ may establish other requirements.

Definitions of Terms

For readers' convenience, this chapter gives the full version of some abbreviations and brief descriptions of some important terms used in this guidance document. Full, official definitions can be found in the sources cited. Nothing in this chapter takes the place of any definitions in laws, rules, or regulations.

Acutely hazardous wastes (40 Code of Federal Regulations (CFRs) Parts 261.31–33 and subject to the exclusion established in 40 CFR Part 261.5; EPA hazardous waste numbers F020, F022, F023, F026, and F027)—A subset of *listed hazardous wastes* that carry the “H” code; they are considered very harmful to human health and the environment.

ASTM—American Society for Testing and Material

CFR—Code of Federal Regulations

Characteristically hazardous waste (40 CFR Part 261 Subpart C)—Any waste that exhibits the characteristics of ignitability, corrosivity, reactivity, and/or toxicity as defined by the EPA in 40 CFR Part 261 Subpart C. These are often referred to as the “D” wastes. (Also see Chapter 3 of this guidance document.)

Class 1 waste [30 TAC Section 335.1(14)]—Any waste or mixture of waste that, because of its concentration or physical or chemical characteristics is toxic; corrosive; flammable; a strong sensitizer or irritant; a generator of sudden pressure by decomposition, heat, or other means; or may pose a substantial present or potential danger to human health or the environment when improperly processed, stored, transported, disposed of, or otherwise managed. (The checklist in Chapter 3 takes you through the process of distinguishing hazardous waste from nonhazardous Class 1 waste.)

Class 2 waste [30 TAC Section 335.1(15)]—Any individual waste or combination of waste that cannot be described as hazardous waste or as nonhazardous Class 1 or Class 3 waste.

Class 3 waste [30 TAC Section 335.1(16)]—Waste that is *inert* and *essentially insoluble* (see definitions of terms in italics), usually including but not limited to materials such as rock, brick, glass, dirt, certain plastics, rubber, and similar materials that are not readily decomposable.

Classification code (30 TAC Section 335.503)—This last digit of the Texas waste code

represents the classification of the waste stream.

The letter H represents hazardous wastes; and the number 1, 2, or 3 represents nonhazardous industrial waste Class 1, 2, or 3.

Conditionally Exempt Small-Quantity Generator (30 TAC Section 335.78)—Generators of less than 100 kg (220 lbs) per month of hazardous waste, or less than 1 kg (2.2 lbs) per month of *acutely hazardous waste* (see description of term in italics in this chapter).

Essential insolubility (30 TAC Section 335.507)—Is established when using:

- the Seven-Day Distilled Water Leachate Test, and the extract from the sample of waste does not leach greater than the Maximum Contaminant Level listed in Appendix 1, Table 3 of 30 TAC Chapter 335, Subchapter R;
- the test methods described in 40 Code of Federal Regulations Part 261, Appendix II, and the extract from the sample of waste does not exhibit detectable levels of the constituents found in Appendix 1, Table 1 of 30 TAC Chapter 335, Subchapter R;
- an appropriate test method, and a representative sampling of the waste does not exhibit detectable levels of total petroleum hydrocarbon (TPH); (“Petroleum substance wastes” are not subject to 30 TAC’s subsection on essential insolubility.)
- an appropriate test method, and a representative sampling of the waste does not exhibit detectable levels of polychlorinated biphenyls (PCBs).

Form code (30 TAC Section 335.503)—This code describes the general type of waste stream. It consists of three numbers, the 5th, 6th, and 7th digits in the Texas waste code (see Figure 4-1 in Chapter 4). More than one form code may apply to a particular waste stream.

Hazardous substance (30 TAC Section 335.508)—Any substance designated as “hazardous” in 40 CFR Part 302 (Table 302.4) including, but not limited to, waste designated as hazardous in the Resource Conservation Recovery Act (RCRA).

Hazardous waste (40 CFR 261.3.)—The EPA defines a waste as hazardous if it exhibits one or more of four hazardous “characteristics,” or if it is one of several hundred wastes “listed” as hazardous. For details, see Chapters 1 and 3 of this guidance document.

Hazardous waste determination (30 TAC Section 335.504)—An evaluation of a waste to determine whether it meets the RCRA definition of a hazardous waste.

Inert (30 TAC Section 335.507)—Inertness refers to the chemical inactivity of an element, compound, or waste. Ingredients added to mixtures chiefly for the purposes of bulk and/or weight are normally considered inert.

Listed hazardous wastes (40 CFR Part 261 Subpart D)—Specific wastes that have been identified by the EPA as hazardous. These are often referred to as the “F” wastes (waste from nonspecific sources); “K” wastes (wastes from specific sources); “P” wastes (acutely hazardous off-specification materials, container residues, and spill residues of these materials); and “U” wastes (toxic, hazardous off-specification materials, container residues, and spill residues).

A waste is considered hazardous if

- it is listed in 40 CFR Part 261 Subpart D, or
- is mixed with or derived from a waste listed there, and
- has not been provided a particular exclusion from the definition of hazardous as provided in 40 CFR Sections 261.3–4.

Matrix interference—Interference with the precision of analytical testing for a particular constituent in a waste stream due to other material(s) in the sample (contamination by carryover). See also waste matrices.

Medical wastes (30 TAC Section 335.508)—Nonhazardous medical wastes that are subject to the provisions of 30 TAC Chapter 330 Subchapter Y are designated as Class 2 wastes. An example of such waste would be needle-bearing syringes from plant infirmaries.

“New chemical substance” waste (30 TAC Section 335.508)—If a nonhazardous industrial waste is generated as a result of the commercial production of a “new chemical substance” as defined by the federal Toxic Substances Control Act, *United States Code Annotated* (U.S.C.A.), Title 15, Section 2602(9), the generator must manage that waste as a Class 1 waste, unless the generator can provide appropriate analytical data and/or process knowledge demonstrating that the waste is Class 2 or Class 3, and the TCEQ concurs. If the generator has not re-

ceived concurrence or denial from the TCEQ within 120 days from the date of the request for review, the generator may manage the waste according to the requested classification, but not before giving 10 working days written notice to the TCEQ.

Notice of Registration (NOR)—TCEQ term for the information it collects in its database on each hazardous or industrial waste handler: generator, receiver, transporter, and recycler. The NOR includes the facility’s physical and mailing addresses, information on waste streams that are generated or handled at the site, a list of individual units at the facility where wastes are managed, and other information. It also contains the state facility identification numbers and the EPA facility number, issued by the TCEQ. The NOR serves to verify the information submitted by each handler. When a generator registers with the TCEQ using form TCEQ-00002, the agency sends back a printout of the information in its database about the site and generator. The handler should keep the NOR current and in on-site files and check it periodically to make sure that it accurately reflects the facility’s waste streams and waste management units.

Petroleum-hydrocarbon-containing wastes (30 TAC Section 335.508)—Wastes resulting from the cleanup of leaking underground storage tanks (USTs), which are regulated under 30 TAC Chapter 334 Subchapter K (relating to Petroleum Substance Waste), are not subject to classification under 30 TAC Chapter 335 Subchapter R (Waste Classification).

Petroleum substance—A crude oil, or any refined or unrefined fraction or derivative of crude oil, that is a liquid at standard conditions of temperature and pressure. These substances include the following:

- combinations or mixtures of basic petroleum substances, such as crude oils, crude oil fractions, petroleum feedstocks, and petroleum fractions;
- aviation gasolines, aviation jet fuels, distillate fuel oils, residual fuel oils, gas turbine fuel oils, illuminating oils, lubricants, building materials, insulating and waterproofing materials, used oils;
- solvents or a combination or mixture of solvents—except for any listed substance regulated as a hazardous waste under the federal Solid Waste Disposal Act, Subtitle C (*United States Code*, Title 42, Section 6921, et seq.)—that are liquid at standard conditions of temperature (20° centigrade) and pressure (1 atmosphere). Examples include Stoddard

solvent, petroleum spirits, mineral spirits, petroleum ether, varnish makers' and painters' naphthas, petroleum extender oils, and commercial hexane.

The following materials are *not* considered petroleum substances:

- polymerized materials, such as plastics, synthetic rubber, polystyrene, high- and low- density polyethylene;
- animal, microbial, and vegetable fats;
- food-grade oils;
- hardened asphalt and solid asphaltic materials, such as roofing shingles, roofing felt, hot mix and cold mix; and
- cosmetics.

Practical Quantitation Limits (PQLs)—See quantitation.

Process Knowledge—See examples in Chapter 4 under this subheading.

Quantitation—Generally, measurement of quantity or amounts. The word appears in a number of specialized terms used in waste regulation:

- **Quantitation Limits (QLs)** indicate the levels at which measurements can be “trusted.”
- **Practical Quantitation Limits (PQLs)** and **Estimated Quantitation Limits (EQLs)** are levels that are routinely and reliably detected and quantitated in a variety of sample matrices. These are 3 to 5 times the Method Detection Limits (MDLs). (See Chapter 1, SW 846, 1992.)
- **Method Detection Limits (MDLs)** take into account the reagents, sample matrix, and preparation steps applied to a sample in specific analytical methods. (See 40 CFR Part 136, Appendix B; Chapter 1, SW 846, July 1992.)

RCRA—Resource Conservation and Recovery Act (amendment to the Solid Waste Disposal Act). Primarily designed to regulate five types of disposal activities: hazardous waste, solid waste, underground storage tanks, oil waste, and medical waste. In this guidance document, any mention of “RCRA” refers to RCRA Subtitle C, which applies to all handlers of hazardous waste, including generators; transporters; and operators of treatment, storage, and disposal (TSDF) facilities. (RCRA, a federal law, covers only whether a solid waste is either hazard-

ous or nonhazardous. Texas regulations further subdivide nonhazardous waste into Classes 1, 2, and 3.)

Regulated asbestos-containing material (RACM) (30 TAC Sections 335.508)—RACM includes the following:

- **friable** asbestos containing more than 1 percent asbestos¹ that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure;
- **nonfriable** asbestos-containing material containing more than 1 percent asbestos as measured by the method found in 40 CFR Part 763, Subpart E, Appendix E, Section 1 that, when dry, *cannot* be crumbled, pulverized, or reduced to powder by hand pressure.
- **Category I** nonfriable asbestos includes packings, gaskets, resilient floor coverings, and asphalt roofing products);
- **Category II** nonfriable asbestos includes transite shingles, transite pipes, and any nonfriable asbestos material not defined as Category I.

Regulated generators (30 TAC Chapter 335 Subchapters A and C)—If you generate the following amounts of waste, you are a regulated generator and must follow regulations in Chapter 335:

| Waste Type | Monthly Amount |
|-------------------|--------------------------|
| Class 1 | 100 kg (220 lbs) or more |
| hazardous | 100 kg (220 lbs) or more |
| acutely hazardous | 1 kg (2.2 lbs) or more |

If you generate less than the amounts shown above, you are considered a Conditionally Exempt Small-Quantity Generator and are not subject to regulations requiring notification, manifesting, and fees.

Sequence number (30 TAC Section 335.503)—The first 4 digits of the waste code (actually these four characters may be numbers, letters, or a combination of the two). The sequence number is used as an internal numbering system determined by each generator. The number of a waste may range from 0001 to 9999, and can only be used once.

Solid waste (30 TAC Section 335.1 and 40 CFR Section 261.2)—Any discarded material such as garbage; refuse; sludge from a waste treatment plant,

¹As determined using the method specified in 40 CFR Part 763, Subpart E, Appendix E, Section 1, Polarized Light Microscopy.

water supply treatment plant, or air pollution control facility; or other material including solid, liquid, semisolid, or contained gaseous material resulting from industrial, municipal, commercial, mining, and agricultural operations. Solid wastes include any material that is abandoned by being disposed of; burned or incinerated; or accumulated, stored, or treated before or in lieu of these activities. Certain recycled materials are also considered wastes. Solid wastes are often referred to simply as “wastes.” For the complete definition of a “solid waste,” please refer to 30 TAC Section 335.1 (Solid Waste).

Specific industrial solid waste (30 TAC Section 335.508)—A nonhazardous waste for which specific classification criteria and/or a form code have been established.

Stabilized wastes (30 TAC Section 335.508)—Wastes that originally exhibit hazardous characteristics can be *stabilized* so that they are no longer hazardous and can meet the criteria for classification as Class 1 or 2 nonhazardous industrial waste. For example a waste containing lead that exhibits the hazardous characteristic of toxicity can be stabilized by mixing with cement in the proper proportion to reduce the toxicity or mobility of contaminants. Depending on the process(es) used, stabilization achieves varying degrees of long-term effectiveness.

Synthetic oils—Oils not derived from crude oil, including those derived from shale, coal, or a polymer-based starting material; and nonpolymeric synthetic fluids that are used as hydraulic fluids and heat transfer fluids, such as those based on phosphate esters, diphenyl oxide, or alkylated benzenes. Synthetic oils are generally used for the same purpose as oils, and they present relatively the same level of hazardousness after use.

TAC—Texas Administrative Code. Title 30 of TAC contains TCEQ rules on industrial solid waste and municipal hazardous waste, among other subjects.

TSDF—Treatment, storage, and disposal facilities.

Universal Waste (30 TAC Section 335.261 and 40 CFR Part 273)—This rule covers five types of waste:

- all hazardous waste batteries as described in 40 CFR 273.2;

- mercury-containing thermostats as described in 40 CFR 273.4;
- some hazardous waste pesticides as described in 40 CFR 273.3;
- paint and paint-related waste as described in §335.262(b);
- lamps as described in 40 CFR §273.5, and §335.261(b)(16)(F).

The rule establishes a reduced set of regulatory requirements for facilities managing universal waste, depending on whether the facility falls into one of four categories:

- small-quantity handler of universal waste (SQHUW),
- large-quantity handler of universal waste (LQHUW),
- transporter of universal waste, or
- final destination facilities.

In addition, the rules establish a petitioning procedure whereby additional wastes may be added to the universal waste rule.

U.S.C.A.—*United States Code Annotated*.

Used oil (30 TAC Section 335.1, 30 TAC Section 324 (relating to used oil), and 40 CFR Part 279 (relating to standards for management of used oil)²—Any oil refined from crude oil, or any synthetic oil, that has been used and, from such use, is contaminated by physical or chemical impurities and cannot be used for its intended purpose (that is, it is a spent material).

Used oil fuel includes any fuel produced from used oil by processing, blending, or other treatment.

Waste—Unwanted materials left over from a manufacturing process; refuse from places of human or animal habitation.

Waste code—Also referred to as Texas waste code (30 TAC Section 335.503)—This 8-digit code identifies a waste stream. The first 4 digits are the *sequence number*, the next 3 digits are the *form code*, and the last digit is the waste’s *classification* (sequence number + form code + classification code = waste code). (Some of the “digits” referred to here actually may be letters or a combination of letters and numbers.)

Waste matrices—Water and soil or sediment in which a waste is found.

²Rules applicable to nonhazardous used oil, are found in Chapter 324, state regulations on recyclable used oil, and 40 CFR Part 279, federal regulations on used oil recycling.

Wastes generated out-of-state (30 TAC Section 335.508)—All nonhazardous industrial waste generated outside the state of Texas and transported into or through Texas for processing, storage, or disposal is classified as Class 1 unless the waste satisfies the Class 2 or 3 criteria as defined in 30 TAC Sections 335.506–8. A Class 2 or 3 waste determination, accompanied by all supporting process knowledge and analytical data, must be submitted to the TCEQ for approval.

Waste stream (30 TAC Section 335.503)—The total flow of solid waste from homes, businesses, institutions, and manufacturing plants that is recycled, burned, or disposed of in landfills; or segments of that total flow, such as the “residential waste stream” or the “recyclable waste stream.” (It should be noted that the terms “waste stream”, “solid waste”, and “waste” are often used interchangeably by federal and state regulators as well as many members of the regulated community).

Hazardous Substances

Applicability: Empty Container Class 2 Evaluations

The following is a listing of materials identified as hazardous substances (40 CFR Table 302.4) in effect at the time of this guideline's printing. (As amended at 57 FR 61492, Dec. 24, 1992; 58 FR 35314, June 30, 1993; 59 FR 31551, June 20, 1994; 60 FR 7824 Feb. 9, 1995). CAS numbers of the materials are also provided.

| Hazardous Substance | CAS Number | Hazardous Substance | CAS Number |
|------------------------------------|------------|---|------------|
| Acenaphthene | 83329 | Ammonium chloride | 12125029 |
| Acenaphthylene | 208968 | Ammonium chromate | 7788989 |
| Acetaldehyde | 75070 | Ammonium citrate, dibasic | 3012655 |
| Acetaldehyde, chloro- | 107200 | Ammonium fluoborate | 13826830 |
| Acetaldehyde, trichloro- | 75876 | Ammonium fluoride | 12125018 |
| Acetamide, N-(aminothioxomethyl)- | 591082 | Ammonium hydroxide | 1336216 |
| Acetamide, N-9H-fluoren-2-yl- | 53963 | Ammonium oxalate | 6009707 |
| Acetic acid | 64197 | Ammonium picrate | 131748 |
| Acetic acid (2,4-dichlorophenoxy)- | 94757 | Ammonium silicofluoride | 16919190 |
| Acetic anhydride | 108247 | Ammonium sulfamate | 7773060 |
| Acetone | 67641 | Ammonium sulfide | 12135761 |
| Acetone cyanohydrin | 75865 | Ammonium sulfite | 10196040 |
| Acetonitrile | 75058 | Ammonium tartrate | 14307438 |
| Acetophenone | 98862 | Ammonium thiocyanate | 1762954 |
| 2-Acetylaminofluorene | 53963 | Ammonium vanadate | 7803556 |
| Acetyl bromide | 506967 | Amyl acetate | 628637 |
| Acetyl chloride | 75365 | iso- | 123922 |
| 1-Acetyl-2-thiourea | 591082 | sec- | 626380 |
| Acrolein | 107028 | tert- | 625161 |
| Acrylamide | 79061 | Aniline | 62533 |
| Acrylic acid | 79107 | Anthracene | 120127 |
| Acrylonitrile | 107131 | Antimony | 7440360 |
| Adipic acid | 124049 | Antimony pentachloride | 7647189 |
| Aldicarb | 116063 | Antimony potassium tartrate | 28300745 |
| Aldicarb sulfone | 1646884 | Antimony tribromide | 7789619 |
| Aldrin | 309002 | Antimony trichloride | 10025919 |
| Allyl alcohol | 107186 | Antimony trifluoride | 7783564 |
| Allyl chloride | 107051 | Antimony trioxide | 1309644 |
| Aluminum phosphide | 20859738 | Aroclor 1016 | 12674112 |
| Aluminum sulfate | 10043013 | Aroclor 1221 | 11104282 |
| Ametycin | 50077 | Aroclor 1232 | 11141165 |
| (7-amino-9-a-methoxymitosane) | | Aroclor 1242 | 53469219 |
| 5-(Aminomethyl)-3-isoxazolol | 2763964 | Aroclor 1248 | 12672296 |
| 4-Aminopyridine | 504245 | Aroclor 1254 | 11097691 |
| Amitrole | 61825 | Aroclor 1260 | 11096825 |
| Ammonia | 7664417 | Arsenic | 7440382 |
| Ammonium acetate | 631618 | Arsenic acid H ₃ AsO ₄ | 1327522 |
| Ammonium benzoate | 1863634 | Arsenic disulfide | 1303328 |
| Ammonium bicarbonate | 1066337 | Arsenic pentoxide, As ₂ O ₅ | 1303282 |
| Ammonium bichromate | 7789095 | Arsenic trichloride | 7784341 |
| Ammonium bifluoride | 1341497 | Arsenic trioxide, As ₂ O ₃ | 1327533 |
| Ammonium bisulfite | 10192300 | Arsenic trisulfide | 1303339 |
| Ammonium carbamate | 1111780 | Arsinic acid, dimethyl- | 75605 |
| Ammonium carbonate | 506876 | Asbestos | 1332214 |
| | | Auramine | 492808 |

Appendix A—Hazardous Substances

| Hazardous Substance | CAS Number | Hazardous Substance | CAS Number |
|--|------------|--|------------|
| Azaserine | 115026 | Butyl acetate | 123864 |
| 1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester | 2212671 | iso- | 110190 |
| Aziridine, 2-methyl | 75558 | sec- | 105464 |
| Barium cyanide | 542621 | tert- | 540885 |
| Benz[c]acridine | 225514 | n-Butyl alcohol | 71363 |
| Benzanthracene | 56553 | Butylamine | 109739 |
| Benz[a]anthracene | 57976 | iso- | 78819 |
| Benzene | 71432 | sec- | 513495 |
| Benzene, dichloromethyl- | 98873 | sec- | 13952846 |
| Benzene, 2,6-diisocyanato-1-methyl- | 91087 | tert- | 75649 |
| Benzene, m-dimethyl | 108383 | Butyl benzyl phthalate | 85687 |
| Benzene, o-dimethyl | 95476 | Butyric acid | 107926 |
| Benzene, p-dimethyl | 106423 | iso-Butyric acid | 79312 |
| Benzenesulfonic acid chloride | 98099 | Cadmium | 7440439 |
| Benzene, (trichloromethyl) | 98077 | Cadmium acetate | 543908 |
| Benzdine | 92875 | Cadmium bromide | 7789426 |
| Benzo[a]anthracene | 56553 | Cadmium chloride | 10108642 |
| 1,3-Benzodioxol-4-ol, 2,2-dimethyl-, (Bendiocarb phenol) | 22961826 | Calcium arsenate | 7778441 |
| 1,3-Benzodioxol-4-ol, 2,2- dimethyl-, methyl carbamate (Bendiocarb) | 22781233 | Calcium arsenite | 52740166 |
| Benzo[b]fluoranthene | 205992 | Calcium carbide | 75207 |
| Benzo(k)fluoranthene | 207089 | Calcium chromate | 13765190 |
| Benzoic acid | 65850 | Calcium cyanide Ca(CN) ₂ | 592018 |
| Benzoic acid, 2-hydroxy-, compound with (3aS-cis)-1,2,3,3a,8,8a- hexahydro-1,3a,8-trimethylpyrrolo- [2,3-b]indol-5-yl methylcarbamate ester (1:1) (Physostigmine salicylate) | 57647 | Calcium dodecylbenzenesulfonate | 26264062 |
| Benzonitrile | 100470 | Calcium hypochlorite | 7778543 |
| Benzo[rs]pentaphene | 189559 | Captan | 133062 |
| Benzo[ghi]perylene | 191242 | Carbamic acid, butyl-, 3-iodo-2-n-butylcarbamate) | 55406536 |
| Benzo[a]pyrene | 50328 | Carbamic acid, [1- [(butylamino)carbonyl]- 1H-benzimidazol-2-yl, methyl ester (Benomyl) | 17804352 |
| p-Benzoquinone | 106514 | Carbamic acid, 1H-benzimidazol-2-yl, methyl ester | 10605217 |
| Benzotrichloride | 98077 | Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester | 101279 |
| Benzoyl chloride | 98884 | Carbamic acid, dimethyl-,1- [(dimethylamino)carbonyl]-5- methyl-1H-pyrazol-3-yl ester | 644644 |
| Benzyl chloride | 100447 | Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)- 1H-pyrazol-5-yl ester | 119380 |
| Beryllium chloride | 7787475 | Carbamic acid, methyl-, 3-methylphenyl ester | 1129415 |
| Beryllium powder | 7440417 | Carbamic acid, [1,2-phenylenebis- (iminocarbonothioyl)]bis-, dimethyl ester | 23564058 |
| Beryllium fluoride | 7787497 | Carbamic acid, phenyl-, 1-methylethyl ester (Propham) | 122429 |
| Beryllium nitrate | 13597994 | Carbamic acid, methylnitroso-, ethyl ester | 615532 |
| alpha-BHC | 319846 | Carbamic chloride, dimethyl- | 79447 |
| beta-BHC | 319857 | Carbamodithioic acid, dibutyl-, sodium salt | 136301 |
| delta-BHC | 319868 | Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester | 95067 |
| 2,2'-Bioxirane | 1464535 | Carbamodithioic acid, diethyl-, sodium salt | 148185 |
| Bis(2-chloroethyl) ether | 111444 | Carbamodithioic acid, dimethyl-, potassium salt | 128030 |
| Bis(2-chloroethoxy)methane | 111911 | | |
| Bis(dimethylthiocarbamoyl) sulfide | 97745 | | |
| Bis(2-ethylhexyl) phthalate | 117817 | | |
| Bromoacetone | 598312 | | |
| Bromoform | 75252 | | |
| 4-Bromophenyl phenyl ether | 101553 | | |
| Brucine | 357573 | | |
| 1-Butanol | 71363 | | |
| 2-Butenal | 123739 | | |

Appendix A—Hazardous Substances

| Hazardous Substance | CAS Number | Hazardous Substance | CAS Number |
|---|------------|--|------------|
| Carbamodithioic acid, dimethyl-, sodium salt | 128041 | Chrysene | 218019 |
| Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid | 144343 | Cobaltous bromide | 7789437 |
| Carbamodithioic acid, (hydroxymethyl)methyl-, monopotassium salt | 51026289 | Cobaltous formate | 544183 |
| Carbamodithioic acid, methyl-, monopotassium salt | 137417 | Cobaltous sulfamate | 14017415 |
| Carbamodithioic acid, methyl-, monosodium salt | 137428 | Copper | 7440508 |
| Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester | 2303175 | Copper, dimethyldithiocarbamate | 137291 |
| Carbamothioic acid, bis(2-methylpropyl)-, S-ethyl ester | 2008415 | Copper cyanide CuCN | 544923 |
| Carbamothioic acid, butylethyl-, S-propyl ester | 1114712 | Coumaphos | 56724 |
| Carbamothioic acid, cyclohexylethyl-, S-ethyl ester | 1134232 | Creosote | 8001589 |
| Carbamothioic acid, dipropyl-, S-ethyl ester (EPTC) | 759944 | Cresol(s) | 1319773 |
| Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester | 52888809 | m-Cresol | 108394 |
| Carbamothioic acid, dipropyl-, S-propyl ester | 1929777 | o-Cresol | 95487 |
| Carbaryl | 63252 | p-Cresol | 106445 |
| Carbofuran | 1563662 | Cumene | 98828 |
| Carbofuran, phenol | 1563388 | Cupric acetate | 142712 |
| Carbosulfan | 55285148 | Cupric acetoarsenite | 12002038 |
| Carbon disulfide | 75150 | Cupric chloride | 7447394 |
| Carbon oxyfluoride | 353504 | Cupric nitrate | 3251238 |
| Carbon tetrachloride | 56235 | Cupric oxalate | 5893663 |
| Chlorambucil | 305033 | Cupric sulfate | 7758987 |
| Chlordane | 57749 | Cupric sulfate, ammoniated | 10380297 |
| Chlorine | 7782505 | Cupric tartrate | 815827 |
| Chlornaphazine | 494031 | Cyanides | 57125 |
| p-Chloroaniline | 106478 | Cyanogen | 460195 |
| Chlorobenzene | 108907 | Cyanogen bromide (CN)Br | 506683 |
| Chlorobenzilate | 510156 | Cyanogen chloride | 506774 |
| p-Chloro-m-cresol | 59507 | Cyclohexane | 110827 |
| Chlorodibromomethane | 124481 | Cyclohexanone | 108941 |
| Chloroethane | 75003 | 2-Cyclohexyl-4,6-dinitrophenol | 131895 |
| 2-Chloroethyl vinyl ether | 110758 | Cyclophosphamide | 50180 |
| Chloroform | 67663 | 2,4-D Acid | 94757 |
| Chloromethyl methyl ether | 107302 | 2,4-D (isopropyl) Esters | 94111 |
| 2-Chloronaphthalene | 91587 | | 94791 |
| 2-Chlorophenol | 95578 | | 94804 |
| 4-Chlorophenyl phenyl ether | 7005723 | | 1320189 |
| 3-Chloropropionitrile | 542767 | | 1928387 |
| Chlorosulfonic acid | 7790945 | | 1928616 |
| 4-Chloro-o-toluidine, hydrochloride | 3165933 | Butoxyethyl | 1929733 |
| Chlorpyrifos | 2921882 | | 2971382 |
| Chromic acetate | 1066304 | Isooctyl | 25168267 |
| Chromic acid | 11115745 | Dichlorophenoxyaceticacid-polyproxybutyl | 53467111 |
| Chromic sulfate | 10101538 | Daunomycin | 20830813 |
| Chromium | 7440473 | DDD | 72548 |
| Chromous chloride | 10049055 | DDE | 72559 |
| | | DDT | 50293 |
| | | Diallate | 2303164 |
| | | Diazinon | 333415 |
| | | Dibenzo[a,h]anthracene | 53703 |
| | | 1,2-Dibromo-3-chloropropane | 96128 |
| | | Dibutylnitrosoamine | 924163 |
| | | Di-n-butyl phthalate | 84742 |
| | | Dicamba | 1918009 |
| | | Dichlobenil | 1194656 |
| | | Dichlone | 117806 |
| | | Dichlorobenzene | 25321226 |
| | | 1,2-Dichlorobenzene | 95501 |
| | | 1,3-Dichlorobenzene | 541731 |
| | | 1,4-Dichlorobenzene | 106467 |
| | | 3,3'-Dichlorobenzidine | 91941 |

Appendix A—Hazardous Substances

| Hazardous Substance | CAS Number | Hazardous Substance | CAS Number |
|--------------------------------------|------------|-------------------------------------|------------|
| Dichlorobromomethane | 75274 | 2,4-Dinitrotoluene | 121142 |
| 1,4-Dichloro-2-butene | 764410 | 2,6-Dinitrotoluene | 606202 |
| Dichlorodifluoromethane | 75718 | Dinoseb | 88857 |
| 1,1-Dichloroethane | 75343 | Di-n-octyl phthalate | 117840 |
| 1,2-Dichloroethane | 107062 | 1,2-Diphenylhydrazine | 122667 |
| 1,1-Dichloroethylene | 75354 | Diphosphoramidate, | 152169 |
| 1,2-Dichloroethylene | 156605 | octamethyl- | |
| Dichloroethyl ether | 111444 | Diphosphoric acid, tetraethyl ester | 107493 |
| Dichloroisopropyl | 108601 | Dipropylamine | 142847 |
| Dichloromethoxyethane | 111911 | Di-n-propylnitrosamine | 621647 |
| Dichloromethyl ether | 542881 | Diquat | 85007 |
| 2,4-Dichlorophenol | 120832 | Disulfoton | 298044 |
| 2,6-Dichlorophenol | 87650 | Dithiobiuret | 541537 |
| Dichlorophenylarsine | 696286 | 1,3-Dithiolane-2- | 26419738 |
| Dichloropropane | 26638197 | carboxaldehyde, 2,4-dimethyl-, | |
| 1,1-Dichloropropane | 78999 | O-[(methylamino) | |
| 1,3-Dichloropropane | 142289 | carbonyl]oxime (Tirpate) | |
| 1,2-Dichloropropane | 78875 | Diuron | 330541 |
| Dichloropropane | 8003198 | Dodecylbenzenesulfonic acid | 27176870 |
| Dichloropropene | 26952238 | Endosulfan | 115297 |
| 2,3-Dichloropropene | 78886 | alpha-Endosulfan | 959988 |
| 1,3-Dichloropropene | 542756 | beta-Endosulfan | 33213659 |
| 2,2-Dichloropropionic acid | 75990 | Endosulfan sulfate | 1031078 |
| Dichlorvos | 62737 | Endothall | 145733 |
| Dicofol | 115322 | Endrin & metabolites | 72208 |
| Dieldrin | 60571 | Endrin aldehyde | 7421934 |
| Diethylamine | 109897 | Epichlorohydrin | 106898 |
| Diethylarsine | 692422 | Epinephrine | 51434 |
| 1,4-Diethylenedioxiide | 123911 | Ethanimidiothioic acid, 2- | 30558431 |
| O,O-Diethyl S-methyl dithiophosphate | 3288582 | (dimethylamino-N-hydroxy-2-oxo-, | |
| Diethyl-p-nitrophenyl phosphate | 311455 | methyl ester (A2213) | |
| Diethyl-o-phthalate | 84662 | Ethanimidiothioic acid, 2- | 23135220 |
| O,O-Diethyl O-pyrazinyl | 297972 | (dimethylamino)-N-[(methylamino) | |
| phosphorothioate | | carbonyl]oxy[-2-oxo-, methyl | |
| Diethylstilbestrol | 56531 | ester (Oxamyl) | |
| Dihydrosafrole | 94586 | Ethanimidiothioic acid, N,N'- | 59669260 |
| Diisopropylfluorophosphate | 55914 | [thiobis[(methylimino) | |
| 3,3'-Dimethoxybenzidine | 119904 | carbonyloxy]] bis-, | |
| Dimethylamine | 124403 | dimethyl ester (Thiodicarb) | |
| p-Dimethylamino-azobenzene | 60117 | Ethanol, 2,2'-oxybis-, | 5952261 |
| 3,3'-Dimethylbenzidine | 119937 | dicarbamate (Diethylene | |
| 1,1-Dimethylhydrazine | 57147 | glycol, dicarbamate) | |
| 1,2-Dimethylhydrazine | 540738 | Ethion | 563122 |
| alpha,alpha- | 122098 | Ethyl acetate | 141786 |
| Dimethylphenethylamine | | Ethyl acrylate | 140885 |
| 2,4-Dimethylphenol | 105679 | Ethylbenzene | 100414 |
| Dimethyl phthalate | 131113 | Ethyl carbamate | 51796 |
| Dimethyl sulfate | 77781 | Ethyl cyanide | 107120 |
| Dinitrobenzene (mixed) | 25154545 | Ethylenebisdithiocarbamic | 111546 |
| m-Dinitrobenzene | 99650 | acid, salts & esters | |
| o-Dinitrobenzene | 528290 | Ethylenediamine | 107153 |
| p-Dinitrobenzene | 100254 | Ethylenediamine- | 60004 |
| 4,6-Dinitro-o-cresol and salts | 534521 | tetraacetic acid (EDTA) | |
| Dinitrophenol | 25550587 | Ethylene dibromide | 106934 |
| 2,5-Dinitrophenol | 329715 | Ethylene glycol | 110805 |
| 2,6-Dinitrophenol | 573568 | monoethyl ether | |
| 2,4-Dinitrophenol | 51285 | Ethylene oxide | 75218 |
| Dinitrotoluene | 25321146 | Ethylenethiourea | 96457 |
| 3,4-Dinitrotoluene | 610399 | Ethylenimine | 151564 |

Appendix A—Hazardous Substances

| Hazardous Substance | CAS Number | Hazardous Substance | CAS Number |
|---|------------|-----------------------------------|------------|
| Ethyl ether | 60297 | Lead acetate | 301042 |
| Ethyl methacrylate | 97632 | Lead arsenate | 7784409 |
| Famphur | 52857 | Lead chloride | 7758954 |
| Ferric ammonium citrate | 1185575 | Lead fluoborate | 13814965 |
| Ferric ammonium oxalate | 2944674 | Lead fluoride | 7783462 |
| Ferric chloride | 7705080 | Lead iodide | 10101630 |
| Ferric fluoride | 7783508 | Lead nitrate | 10099748 |
| Ferric nitrate | 10421484 | Lead phosphate | 7446277 |
| Ferric sulfate | 10028225 | Lead stearate | 7428480 |
| Ferrous ammonium sulfate | 10045893 | Lead subacetate | 1335326 |
| Ferrous chloride | 7758943 | Lead sulfate | 15739807 |
| Ferrous sulfate | 7720787 | Lead sulfide | 1314870 |
| Fluoranthene | 206440 | Lead thiocyanate | 592870 |
| Fluorene | 86737 | Lithium chromate | 14307358 |
| Fluorine | 7782414 | Malathion | 121755 |
| Fluoroacetamide | 640197 | Maleic acid | 110167 |
| Fluoroacetic acid, sodium salt | 62748 | Maleic anhydride | 108316 |
| Formaldehyde | 50000 | Maleic hydrazide | 123331 |
| Formic acid | 64186 | Manganese dimethyldithiocarbamate | 15339363 |
| Fumaric acid | 110178 | Melphalan | 148823 |
| Furan | 110009 | Mercaptodimethur | 2032657 |
| Furfural | 98011 | Mercuric cyanide | 592041 |
| Glauramine | 492808 | Mercuric nitrate | 10045940 |
| Glycidylaldehyde | 765344 | Mercuric sulfate | 7783359 |
| Guanidine, N-methyl-N'-nitro-N-nitroso- | 70257 | Mercuric thiocyanate | 592858 |
| Guthion | 86500 | Mercurous nitrate | 10415755 |
| Heptachlor | 76448 | Mercury | 7439976 |
| Heptachlor epoxide | 1024573 | Mercury fulminate | 628864 |
| Hexachlorobenzene | 118741 | Methacrylonitrile | 126987 |
| Hexachlorobutadiene | 87683 | Methanesulfonic acid, ethyl ester | 62500 |
| Hexachlorocyclohexane (all isomers) | 608731 | Methanimidamide, | 23422539 |
| Hexachlorocyclohexane | 58899 | N,N-dimethyl-N'- | |
| (gamma isomer - Lindane) | | [3-[[[(methylamino)carbonyl] | |
| Hexachlorocyclopentadiene | 77474 | oxy]phenyl]-, monohydrochloride | |
| Hexachloroethane | 67721 | Methanimidamide, | 17702577 |
| Hexachlorophene | 70304 | N,N-dimethyl-N'- | |
| Hexachloropropene | 1888717 | [2-methyl-4-[[[(methylamino) | |
| Hexaethyl tetraphosphate | 757584 | carbonyl]oxy]phenyl]- | |
| Hydrazine | 302012 | Methanol | 67561 |
| Hydrazine, 1,2-diethyl- | 1615801 | Methapyrilene | 91805 |
| Hydrochloric acid | 7647010 | Methomyl | 16752775 |
| Hydrocyanic acid | 74908 | Methoxychlor | 72435 |
| Hydrofluoric acid | 7664393 | Methyl bromide | 74839 |
| Hydrogen sulfide H ₂ S | 7783064 | 1-Methylbutadiene | 504609 |
| Hydroperoxide, 1-methyl-1-phenylethyl | 80159 | Methyl chloride | 74873 |
| Indeno(1,2,3-cd)pyrene | 193395 | Methyl chlorocarbonate | 79221 |
| Iron, tris | 14484641 | 3-Methylcholanthrene | 56495 |
| (dimethylcarbamo-dithioato-S,S')- | | 4,4'-Methylene(bis)chloroaniline | 101144 |
| Isobutyl alcohol | 78831 | Methylene bromide | 74953 |
| Isodrin | 465736 | Methylene chloride | 75092 |
| Isophorone | 78591 | Methyl ethyl ketone (MEK) | 78933 |
| Isoprene | 78795 | Methyl ethyl ketone peroxide | 1338234 |
| Isopropanolamine | 42504461 | Methyl hydrazine | 60344 |
| dodecylbenzenesulfonate | | Methyl iodide | 74884 |
| Isosafrole | 120581 | Methyl isobutyl ketone | 108101 |
| 3(2H)-Isoxazolone, 5-(aminomethyl)- | 2763964 | Methyl isocyanate | 624839 |
| Kepone | 143500 | Methylmercaptan | 74931 |
| Lasiocarpine | 303344 | Methyl methacrylate | 80626 |
| Lead | 7439921 | Methyl parathion | 298000 |

Appendix A—Hazardous Substances

| Hazardous Substance | CAS Number | Hazardous Substance | CAS Number |
|------------------------------------|------------|-----------------------------------|------------|
| Methylthiouracil | 56042 | Phenol, 3-methyl-5- | 2631370 |
| Mevinphos | 7786347 | (1-methylethyl)-, methyl | |
| Mexacarbate | 315184 | carbamate (Promecarb) | |
| Mitomycin C | 50077 | Phenylmercury acetate | 62384 |
| Monoethylamine | 75047 | Phenylthiourea | 103855 |
| Monomethylamine | 74895 | Phorate | 298022 |
| Naled | 300765 | Phosgene | 75445 |
| 1-Naphthalenamine | 134327 | Phosphine | 7803512 |
| 2-Naphthalenamine | 91598 | Phosphoric acid | 7664382 |
| Naphthalene | 91203 | Phosphorodithioic acid, | 60515 |
| 1,4-Naphthalenedione | 130154 | O,O-dimethyl S- | |
| Naphthenic acid | 1338245 | [2(methylamino)-2-oxoethyl] ester | |
| alpha-Naphthylthiourea | 86884 | Phosphorus | 7723140 |
| Nickel | 7440020 | Phosphorus oxychloride | 10025873 |
| Nickel ammonium sulfate | 15699180 | Phosphorus pentasulfide | 1314803 |
| Nickel carbonyl | 13463393 | Phosphorus trichloride | 7719122 |
| Nickel chloride | 7718549 | Phthalic anhydride | 85449 |
| Nickel cyanide Ni(CN) ₂ | 557197 | Piperidine, 1-nitroso- | 100754 |
| Nickel hydroxide | 12054487 | Piperidine, 1,1'- | 120547 |
| Nickel nitrate | 14216752 | (tetrathiodicarbonothioyl)bis- | |
| Nickel sulfate | 7786814 | (Bis(pentamethylene)thiuram | |
| Nicotine, & salts | 54115 | tetrasulfide) | |
| Nitric acid | 7697372 | Polychlorinated biphenyls (PCBs) | 1336363 |
| p-Nitroaniline | 100016 | Aroclor 1016 | 12674112 |
| Nitrobenzene | 98953 | Aroclor 1221 | 11104282 |
| Nitrogen dioxide NO ₂ | 10102440 | Aroclor 1232 | 11141165 |
| Nitrogen oxide NO | 10102439 | Aroclor 1242 | 53469219 |
| Nitroglycerine | 55630 | Aroclor 1248 | 12672296 |
| Nitrophenol (mixed) | 25154556 | Aroclor 1254 | 11097691 |
| m-Nitrophenol | 554847 | Aroclor 1260 | 11096825 |
| o-Nitrophenol | 88755 | Potassium arsenate | 7784410 |
| p-Nitrophenol | 100027 | Potassium arsenite | 10124502 |
| 2-Nitropropane | 79469 | Potassium bichromate | 7778509 |
| N-Nitrosodiethanolamine | 1116547 | Potassium chromate | 7789006 |
| N-Nitrosodiethylamine | 55185 | Potassium cyanide KCN | 151508 |
| N-Nitrosodimethylamine | 62759 | Potassium hydroxide | 1310583 |
| N-Nitrosodiphenylamine | 86306 | Potassium permanganate | 7722647 |
| N-Nitrosopyrrolidine | 930552 | Potassium silver cyanide | 506616 |
| Nitrotoluene | 1321126 | Pronamide | 23950585 |
| m-Nitrotoluene | 99081 | 1,3-Propane sultone | 1120714 |
| o-Nitrotoluene | 88722 | Propanedinitrile | 109773 |
| p-Nitrotoluene | 99990 | Propargite | 2312358 |
| 5-Nitro-o-toluidine | 99558 | Propargyl alcohol | 107197 |
| Osmium tetroxide OsO ₄ | 20816120 | Propionic acid | 79094 |
| Paraformaldehyde | 30525894 | Propionic anhydride | 123626 |
| Paraldehyde | 123637 | n-Propylamine | 107108 |
| Parathion | 56382 | Propylene oxide | 75569 |
| Pentachlorobenzene | 608935 | Pyrene | 129000 |
| Pentachloroethane | 76017 | Pyrethrins | 121299 |
| Pentachloronitrobenzene | 82688 | Pyridine | 110861 |
| Pentachlorophenol | 87865 | Pyridine, 2-methyl- | 109068 |
| Perchloroethylene | 127184 | Pyrrolo[2,3-b] indol-5-ol, | 57476 |
| Phenacetin | 62442 | 1,2,3,3a,8,8a-hexahydro-1,3a,8- | |
| Phenanthrene | 85018 | trimethyl-, methylcarbamate | |
| Phenol | 108952 | (ester), (3aS-cis)-Physostigmine | |
| Phenol, 3-(1-methylethyl)-, | 64006 | Quinoline | 91225 |
| methyl carbamate (m-Cumenyl | | Reserpine | 50555 |
| methylcarbamate) | | Resorcinol | 108463 |
| | | Saccharin and salts | 81072 |

Appendix A—Hazardous Substances

| Hazardous Substance | CAS Number | Hazardous Substance | CAS Number |
|---|------------|---|------------|
| Safrole | 94597 | Thallium(I) acetate | 563688 |
| Selenious acid | 7783008 | Thallium(I) carbonate | 6533739 |
| Selenium | 7782492 | Thallium chloride TlCl | 7791120 |
| Selenium dioxide | 7446084 | Thallium(I) nitrate | 10102451 |
| Selenium sulfide SeS ₂ | 7488564 | Thallium oxide Tl ₂ O ₃ | 1314325 |
| Selenourea | 630104 | Thallium selenite | 12039520 |
| Silver | 7440224 | Thallium(I) sulfate | 7446186 |
| Silver cyanide AgCN | 506649 | 2H-1,3,5-Thiadiazine-2-thione, tetrahydro-3,5-dimethyl- (Dazomet) | 533744 |
| Silver nitrate | 7761888 | Thioacetamide | 62555 |
| Silvex (2,4,5-TP) | 93721 | Thiofanox | 39196184 |
| Sodium | 7440235 | Thioperoxydicarbonic diamide, tetraethyl (Tetrabutylthiuram disulfide) | 1634022 |
| Sodium arsenate | 7631892 | Thioperoxydicarbonic diamide, tetraethyl (Disulfiram) | 97778 |
| Sodium arsenite | 7784465 | Thiophenol | 108985 |
| Sodium azide | 26628228 | Thiosemicarbazide | 79196 |
| Sodium bichromate | 10588019 | Thiourea | 62566 |
| Sodium bifluoride | 1333831 | Thiourea, (2-chlorophenyl)- | 5344821 |
| Sodium bisulfite | 7631905 | Thiram | 137268 |
| Sodium chromate | 7775113 | Toluene | 108883 |
| Sodium cyanide NaCN | 143339 | Toluenediamine | 95807 |
| Sodium dodecyl- benzenesulfonate | 25155300 | Toluene diisocyanate | 584849 |
| Sodium fluoride | 7681494 | o-Toluidine | 95534 |
| Sodium hydrosulfide | 16721805 | p-Toluidine | 106490 |
| Sodium hydroxide | 1310732 | o-Toluidine hydrochloride | 636215 |
| Sodium hypochlorite | 7681529 | Toxaphene | 8001352 |
| Sodium methylate | 124414 | 2,4,5-TP esters | 32534955 |
| Sodium nitrite | 7632000 | Trichlorfon | 52686 |
| Sodium phosphate, dibasic | 7558794 | 1,2,4-Trichlorobenzene | 120821 |
| Sodium phosphate, tribasic | 7601549 | 1,1,1-Trichloroethane | 71556 |
| Sodium selenite | 10102188 | 1,1,2-Trichloroethane | 79005 |
| Streptozotocin | 18883664 | Trichloroethene (Trichloroethylene) | 79016 |
| Strontium chromate | 7789062 | Trichloromethanesulfonyl chloride | 594423 |
| Strychnine, & salts | 57249 | Trichloromonofluoromethane | 75694 |
| Styrene | 100425 | Trichlorophenol | 25167822 |
| Sulfur monochloride | 12771083 | 2,3,4-Trichlorophenol | 15950660 |
| Sulfuric acid | 7664939 | 2,3,5-Trichlorophenol | 933788 |
| 2,4,5-T acid | 93765 | 2,3,6-Trichlorophenol | 933755 |
| 2,4,5-T amines | 2008460 | 3,4,5-Trichlorophenol | 609198 |
| | 1319728 | 2,4,5-Trichlorophenol | 95954 |
| | 3813147 | 2,4,6-Trichlorophenol | 88062 |
| | 6369966 | Triethanolamine | 27323417 |
| | 6369977 | dodecylbenzenesulfonate | |
| 2,4,5-T (n-butyl) esters | 93798 | Triethylamine | 121448 |
| | 1928478 | Trimethylamine | 75503 |
| | 2545597 | 1,3,5-Trinitrobenzene | 99354 |
| Isooctyl | 25168154 | Tris(2,3-dibromopropyl)phosphate | 126727 |
| Methylpropyl | 61792072 | Trypan blue | 72571 |
| 2,4,5-T salts | 13560991 | Uracil mustard | 66751 |
| 1,2,4,5-Tetrachlorobenzene | 95943 | Uranyl acetate | 541093 |
| 2,3,7,8-Tetrachloro- dibenzo-p-dioxin (TCDD) | 1746016 | Uranyl nitrate | 10102064 |
| 1,1,1,2-Tetrachloroethane | 630206 | Urea, N-ethyl-N-nitroso- | 759739 |
| 1,1,2,2-Tetrachloroethane | 79345 | Urea, N-methyl-N-nitroso- | 684935 |
| 2,3,4,6-Tetrachlorophenol | 58902 | Vanadium pentoxide | 1314621 |
| Tetraethyllead | 78002 | Vanadyl sulfate | 27774136 |
| Tetraethyldithiopyrophosphate | 3689245 | Vinyl chloride | 75014 |
| Tetrahydrofuran | 109999 | Vinyl acetate | 108054 |
| Tetranitromethane | 509148 | | |
| Thallium | 7440280 | | |

Appendix A—Hazardous Substances

| Hazardous Substance | CAS Number | Hazardous Substance | CAS Number |
|---|------------|---|------------|
| Vinylamine, N-methyl-N-nitroso- | 4549400 | Zinc cyanide $\text{Zn}(\text{CN})_2$ | 557211 |
| Warfarin, and salts, when present at concentrations greater than 0.3% | 81812 | Zinc fluoride | 7783495 |
| Xylene (mixed) | 1330207 | Zinc formate | 557415 |
| Xylenol | 1300716 | Zinc hydrosulfite | 7779864 |
| Zinc | 7440666 | Zinc nitrate | 7779886 |
| Zinc acetate | 557346 | Zinc phenolsulfonate | 127822 |
| Zinc ammonium chloride | 52628258 | Zinc phosphide Zn_3P_2 | 1314847 |
| Zinc, bis(dimethyl carbomodithioato-S,S')- (Ziram) | 137304 | when present at concentrations greater than 10% | |
| Zinc, bis(diethylcarbamo dithioato-S,S')- (Ethyl Ziram) | 14324551 | Zinc silicofluoride | 16871719 |
| Zinc borate | 1332076 | Zinc sulfate | 7733020 |
| Zinc bromide | 7699458 | Zirconium nitrate | 13746899 |
| Zinc carbonate | 3486359 | Zirconium potassium fluoride | 16923958 |
| Zinc chloride | 7646857 | Zirconium sulfate | 14644612 |
| | | Zirconium tetrachloride | 10026116 |

Ignitable Solids

(30 TAC Chapter 335 Subchapter R Appendix 1 Table 2)

Constituents listed from Department of Transportation Regulations, 49 CFR Part 173 Subpart E, October 1, 1993. Note: The presence of a constituent on this table in a nonhazardous waste does not automatically identify that waste as a Class 1 ignitable waste. The constituents on this table are examples of materials which could be considered Class 1 ignitable waste. The physical characteristics of the waste will be the determining factor as to whether or not a waste is ignitable. Refer to 30 TAC §335.505(2) (relating to Class 1 Waste Determination) for the Class 1 ignitable criteria.

| Compound or Material | Compound or Material |
|---|---|
| Aluminum, metallic, powder | Calcium silicide |
| Alkali metal amalgams | Camphor, synthetic |
| Alkali metal amides | Carbon, activated |
| Aluminum alkyl halides | Celluloid |
| Aluminum alkyl hydrides | Cerium |
| Aluminum alkyls | Cesium metal |
| Aluminum borohydrides | Chromic acid or chromic acid mixture, dry |
| Aluminum carbide | Cobalt naphthenates, powder |
| Aluminum ferrosilicon powder | Cobalt resinate |
| Aluminum hydride | Decaborane |
| Aluminum phosphide | 2-Diazo-1-naphthol-4-sulphochloride |
| Aluminum resinate | 2-Diazo-1-naphthol-5-sulphochloride |
| Aluminum silicon powder | 2,5-Diethoxy-4-morpholinobenzene- |
| Ammonium picrate | diazonium zinc choride |
| 2,2'-Azodi(2,4-dimethyl-4-methoxyvaleronitrile) | Diethylzinc |
| 2, 2'-Azodi(2,4-dimethylvaleronitrile) | 4-Dimethylamino-6-(2-dimethylaminoethoxy)- |
| 1, 1' Azodi(hexahydrobenzonitrile) | toluene-2-diazonium zinc chloride |
| 2,2'-Azodi(2-methyl-butryronitrile) | Dimethylzinc |
| Azodiisobutyronitrile | Dinitrophenolates |
| Barium, metallic | Dinitroresorcinol |
| Barium alloys, pyrophoric | N,N'-Dinitroso-N,N'-dimethylterephthalamide |
| Barium azide | N,N'-Dinitrosopentamethylenetetramine |
| Benzene-1,3-disulfohydrazide | Diphenyloxide-4,4'-disulfohydrazide |
| Benzene sulfohydrazide | Dipicryl sulfide |
| 4-(Benzyl(ethyl)amino)-3-ethoxy- | 4-Dipropylaminobenzenediazonium zinc chloride |
| benzenediazonium zinc chloride | Ferrocium |
| 4-(Benzyl(methyl)amino)-3-ethoxy- | Ferrosilicon |
| benzenediazonium zinc chloride | Ferrous metal |
| Borneol | Hafnium powder |
| Boron trifluoride dimethyl etherate | Hexamine |
| 5-tert-Butyl-2,4,6-trinitro-m-xylene | Hydrides, metal |
| Calcium, metallic | 3-(2-Hydroxyethoxy)-4-pyrrolidin-1- |
| Calcium carbide | ylbenzenediazonium zinc chloride |
| Calcium chlorite | Iron oxide, spent |
| Calcium cyanamide | Isosorbide dinitrate mixture |
| Calcium dithionite | Lead phosphite, dibasic |
| Calcium hypochlorite | Lithium acetylide-ethylene diamine complex |
| Calcium manganese silicon | Lithium alkyls |
| Calcium silicon powder | Lithium aluminum hydride |
| Calcium phosphide | Lithium amide, powdered |
| Calcium pyrophoric | Lithium borohydride |
| Calcium resinate | Lithium ferrosilicon |

Appendix B—Ignitable Solids

| Compound or Material | Compound or Material |
|--|--|
| Lithium hydride | Silicon powder, amorphous |
| Lithium metal | Silver picrate |
| Lithium nitride | Sodium, metallic |
| Lithium silicon | Sodium aluminum hydride |
| Magnesium granules | Sodium amide |
| Magnesium aluminum phosphide | Sodium borohydride |
| Magnesium diamide | Sodium chlorite |
| Magnesium phosphide | Sodium 2-diazo-1-naphthol-4-sulphonate |
| Magnesium silicide | Sodium 2-diazo-1-naphthol-5-sulphonate |
| Maneb | Sodium dichloro-s-triazinetriene |
| Manganese resinate | Sodium dinitro-ortho-cresolate |
| Methyl magnesium bromide | Sodium hydride |
| Methyldichlorosilane | Sodium hydrosulfite |
| Mono-(trichloro)tetra(monopotassium dichloro)- penta-s-triazinetriene | Sodium methylate |
| N-Methyl-N'-nitronitrosoguanidine | Sodium nitrite and mixtures |
| Naphthalene | Sodium picramate, wet |
| Nitrocellulose mixtures | Sodium potassium alloys |
| Nitroguanidine | Sodium sulfide, anhydrous |
| p-Nitrosodimethylaniline | Stannic phosphide |
| Paraformaldehyde | Strontium phosphide |
| Pentaborane | Sulfur |
| Peracetic acid | Titanium metal powder |
| Phosphorous, amorphous, red | Titanium hydride |
| Phosphorous, white or yellow | Trichloroisocyanuric acid |
| Phosphoric anhydride | Trichlorosilane |
| Phosphorous pentachloride | Trichloro-s-triazinetriene |
| Phosphorus pentasulfide | Trinitrobenzoic acid |
| Phosphorus sesquisulfide | Trinitrophenol |
| Phosphorus trisulfide | Trinitrotoluene |
| Picric acid | Urea nitrate |
| Potassium, metallic | Zinc ammonium nitrite |
| Potassium dichloro-s-triazinetriene | Zinc phosphide |
| Potassium borohydride | Zinc powder |
| Potassium dithionite | Zinc resinate |
| Potassium phosphide | Zirconium hydride, powdered |
| Potassium sulfide, anhydrous | Zirconium picramate |
| Rubidium metal | Zirconium powder |
| | Zirconium scrap |

Class 1 Toxic Constituents' Maximum Leachable Concentrations

(30 TAC Chapter 335 Subchapter R Appendix 1 Table 1)

Applicability: Class 1, 2, and 3 Waste Evaluations

Values are based on information contained in Federal Registers Vol. 55 / Friday, July 27, 1990;
Vol. 56 / June 7, 1991; and Integrated Risk Information Systems, Environmental Protection
Agency, and 40 CFR 264 Appendix 9.

| Compound | CAS No. | Concentration (mg/l) | Compound | CAS No. | Concentration (mg/l) |
|-----------------------------|-----------|----------------------|---|------------|----------------------|
| Acenaphthene | 83-32-9 | 210 | 3,3-Dichlorobenzidine | 91-94-1 | 0.8 |
| Acetone | 67-64-1 | 400 | 1,2-Dichloroethane | 107-06-2 | 0.50 |
| Acetonitrile | 75-05-8 | 20 | Dichlorodifluoromethane | 75-71-8 | 700 |
| Acetophenone | 98-86-2 | 400 | 1,1-Dichloroethylene | 75-35-4 | 0.6 |
| Acrylamide | 79-06-1 | 0.08 | 1,3-Dichloropropene | 542-75-6 | 1 |
| Acrylonitrile | 107-13-1 | 0.6 | 2,4-Dichlorophenol | 120-83-2 | 10 |
| Aniline | 62-53-3 | 60 | 2,4-Dichlorophenoxy-acetic acid (2,4-D) | 94-75-7 | 10.0 |
| Anthracene | 120-12-7 | 1050 | Dieldrin | 60-57-1 | 0.02 |
| Antimony | 7440-36-0 | 1 | Diethyl phthalate | 84-66-2 | 3000 |
| Arsenic | 7440-38-2 | 1.8 | Dimethoate | 60-51-5 | 70 |
| Barium | 7440-39-3 | 100.0 | 2,4-Dimethyphenol | 105-67-9 | 70 |
| Benzene | 71-43-2 | 0.50 | 2,6-Dimethyphenol | 576-26-1 | 21 |
| Benzidine | 92-87-5 | 0.002 | m-Dinitrobenzene | 99-65-0 | 0.4 |
| Beryllium | 7440-41-7 | 0.08 | 2,4-Dinitrophenol | 51-28-5 | 7 |
| Bis(2-chloroethyl) ether | 111-44-4 | 0.3 | 2,4-Dinitrotoluene | 602-01-7 | 0.13 |
| Bis(2-ethylhexyl) phthalate | 117-81-7 | 30 | (and 2,6-, mixture) | | |
| Bromodichloromethane | 75-27-4 | 0.3 | Dinoseb | 88-85-7 | 3.5 |
| Bromomethane | 74-83-9 | 5 | 1,4-Dioxane | 123-91-1 | 30 |
| Butylbenzyl phthalate | 85-68-7 | 700 | Dioxins (Polychlorinated dibenzo-p-dioxins) | | |
| Cadmium | 7440-43-9 | 0.5 | 2,3,7,8-TCDD | 1746-01-6 | 0.005 |
| Carbon disulfide | 75-15-0 | 400 | 1,2,3,7,8-PeCDD | 40321-76-4 | 0.010 |
| Carbon tetrachloride | 56-23-5 | 0.50 | 1,2,3,4,7,8-HxCDD | 57653-85-7 | 0.050 |
| Chlordane | 57-74-9 | 0.03 | 1,2,3,6,7,8-HxCDD | 34465-46-8 | 0.050 |
| Chlorobenzene | 108-90-7 | 70 | 1,2,3,7,8,9-HxCDD | | 0.050 |
| Chloroform | 67-66-3 | 6.0 | Diphenylamine | 122-39-4 | 90 |
| Chloro-m-cresol, p | 59-50-7 | 7000 | 1,2-Diphenylhydrazine | 122-66-7 | 0.4 |
| 2-Chlorophenol | 95-57-8 | 20 | Disulfoton | 298-04-4 | 0.1 |
| Chromium | 7440-47-3 | 5.0 | Endosulfan | 959-98-8 | 0.2 |
| m-Cresol | 108-39-4 | 200.0* | Endrin | 72-20-8 | .02 |
| o-Cresol | 95-48-7 | 200.0* | 2-Ethoxyethanol | 10-80-5 | 1400 |
| p-Cresol | 106-44-5 | 200.0* | Ethylbenzene | 100-41-4 | 400 |
| DDD | 72-54-8 | 1 | Ethylene dibromide | 106-93-4 | 0.004 |
| DDE | 72-55-9 | 1 | Ethylene glycol | 107-21-1 | 7000 |
| DDT | 50-29-3 | 1 | Fluoranthene | 206-44-0 | 140 |
| Dibutyl phthalate | 84-74-2 | 400 | Fluorene | 86-73-7 | 140 |
| 1,4-Dichlorobenzene | 106-46-7 | 7.5 | | | |

*Appendix C — Class 1 Toxic Constituents'
Maximum Leachable Concentrations (MCLs)*

| Compound | CAS No. | Concentration (mg/l) | Compound | CAS No. | Concentration (mg/l) |
|--|------------|----------------------|---------------------------------------|------------|----------------------|
| Furans (Polychlorinated dibenzofurans) | | | p-Phenylenediamine | 106-50-3 | 20 |
| 2,3,7,8-TCDF | 51207-31-9 | 0.050 | Parathion | 56-38-2 | 20 |
| 1,2,3,7,8-PeCDF | | 0.100 | Pentachlorobenzene | 608-93-5 | 3 |
| 2,3,4,7,8-PeCDF | | 0.010 | Pentachloronitrobenzene | 82-68-8 | 10 |
| 1,2,3,4,7,8-HxCDF | | 0.050 | Pentachlorophenol | 87-86-5 | 100.0 |
| 1,2,3,6,7,8-HxCDF | | 0.050 | Phenol | 108-95-2 | 2000 |
| 1,2,3,7,8,9-HxCDF | | 0.050 | Pronamide | 23950-58-5 | 300 |
| Heptachlor | 76-44-8 | 0.008 | Pyrene | 129-00-0 | 5.9 |
| Heptachlor epoxide | 1024-57-3 | 0.04 | Pyridine | 110-86-1 | 4 |
| Hexachlorobenzene | 118-74-1 | 0.13 | Selenium | 7782-49-2 | 1.0 |
| Hexachloro-1,3-butadiene | 87-68-3 | 0.4 | Silver | 7440-22-4 | 5.0 |
| Hexachlorocyclopentadiene | 77-47-4 | 20 | Styrene | 100-42-5 | 700 |
| Hexachloroethane | 67-72-1 | 3.0 | 1,1,1,2-Tetrachloroethane | 630-20-6 | 10 |
| Hexachlorophene | 70-30-4 | 1 | 1,1,2,2-Tetrachloroethane | 79-34-5 | 2 |
| Isobutyl alcohol | 78-83-1 | 1000 | Tetrachloroethylene | 127-18-4 | 0.7 |
| Isophorone | 78-59-1 | 90 | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 100 |
| Lead | 7439-92-1 | 1.5 | Toluene | 108-88-3 | 1000 |
| Lindane | 58-89-9 | 0.3 | Toxaphene | 8001-35-2 | 0.3 |
| Mercury | 7439-97-6 | 0.2 | trans-1,3-Dichloropropene | 542-75-6 | 1 |
| Methacrylonitrile | 126-98-7 | 0.4 | Tribromomethane | 75-25-2 | 70 |
| Methomyl | 16752-77-5 | 90 | (Bromoform) | | |
| Methoxychlor | 72-43-5 | 10.0 | 1,2,4-Trichlorobenzene | 120-82-1 | 70 |
| 2-Methoxyethanol | 109-86-4 | 14.0 | 1,1,1-Trichloroethane | 71-55-6 | 300 |
| Methyl ethyl ketone | 78-93-3 | 200.0 | Trichloroethylene | 79-01-6 | 0.5 |
| Methyl isobutyl ketone | 108-10-1 | 200 | 1,1,2-Trichloroethane | 79-00-5 | 6 |
| Methylene chloride | 75-09-2 | 50 | Trichlorofluoromethane | 75-69-4 | 1000 |
| Methyl parathion | 298-00-0 | 0.9 | 2,4,5-Trichlorophenoxy-propionic acid | 93-72-1 | 1.0 |
| Mirex | 2385-85-5 | 0.7 | (2,4,5-TP or Silvex) | | |
| Nickel | 7440-02-0 | 70 | 1,2,3-Trichloropropane | 96-18-4 | 20 |
| Nitrobenzene | 98-95-3 | 2.0 | 2,4,5-Trichlorophenol | 95-95-4 | 400.0 |
| N-Nitroso-di-n-butylamine | 924-16-3 | 0.06 | 2,4,6-Trichlorophenol | 88-06-2 | 2 |
| N-Nitrosodiphenylamine | 86-30-6 | 70 | Vanadium pentoxide | 1314-62-1 | 30 |
| N-Nitrosomethylethylamine | 10595-95-6 | 0.02 | Vinyl chloride | 75-01-4 | 0.2 |
| N-Nitroso-n-propylamine | 621-64-7 | 0.05 | Xylenes (all isomers) | 1330-82-1 | 7000 |
| N-Nitrosopyrrolidine | 930-55-2 | 0.2 | | | |

* If o-, m-, and p-cresol concentrations cannot be differentiated, the total cresol concentration is used.

The Maximum Concentration for total cresol is 200.0 mg/l.

7-Day Distilled Water Leachate Test's Maximum Contaminant Levels

(30 TAC Chapter 335 Subchapter R APPENDIX 1 Table 3)

Applicability: **Class 3 Waste Evaluations**

Values obtained from 40 Code of Federal Regulations Part 141, Subparts B and G, Maximum Contaminant Levels and 40 Code of Federal Regulations Part 143, Total Dissolved Solids.

| Constituent | MCL (mg/l) |
|-----------------------------|------------|
| Arsenic | 0.05 |
| Barium | 1 |
| *Benzene | 0.005 |
| Cadmium | 0.005 |
| *Carbon tetrachloride | 0.005 |
| Chlordane | 0.002 |
| *Chlorobenzene | 0.1 |
| Chromium | 0.1 |
| 2,4-D | 0.07 |
| *Dibromochloropropane | 0.0002 |
| *ortho-Dichlorobenzene | 0.6 |
| *para-Dichlorobenzene | 0.075 |
| *1,2-Dichloroethane | 0.005 |
| *1,1-Dichloroethylene | 0.007 |
| *trans-1,2-Dichloroethylene | 0.1 |
| *1,2-Dichloropropane | 0.005 |
| *Ethylbenzene | 0.7 |
| Heptachlor | 0.0004 |
| Heptachlor epoxide | 0.0002 |
| Lead | 0.05 |
| Mercury | 0.002 |
| Methoxychlor | 0.04 |
| Pentachlorophenol | 0.001 |
| Selenium | 0.05 |
| Silver | 0.05 |
| *Styrene | 0.1 |
| *Tetrachloroethylene | 0.005 |
| *1,1,1-Trichloroethane | 0.20 |
| *Trichloroethylene | 0.005 |
| *Toluene | 1 |
| Toxaphene | 0.003 |
| 2,4,5-TP (Silvex) | 0.05 |
| *Vinyl chloride | 0.002 |
| *Xylenes (total) | 10 |
| Total dissolved solids | 500 |

* For a Class 3 waste classification, these constituents must also be evaluated using the test methods described in 40 Code of Federal Regulations, Part 261, Appendix II. See §335.507 (4) (A) (ii) for additional information.

Class 1 Toxic Constituents

(other than those identified in Appendix C, and their Estimated Quantitation Limits [EQLs])

Applicability: Class 3 Waste Evaluations

This table is to be utilized by the generator in evaluating detection limits for the identified constituents. The EQLs in this table are defined as the lowest detectable levels that can be reliably achieved using the Toxicity Characteristic Leaching Procedure (TCLP) at the time of the printing of this guideline. Applicable EPA method numbers are provided and can be found in EPA Report SW-846 "Test Methods for Evaluating Solid Waste" except where noted. Please note that more than one test method may be available for a particular constituent. Synonyms are provided in brackets "[]".

| Constituent | EQL (mg/l) | Method(s) | Constituent | EQL (mg/l) | Method(s) |
|-------------------------------------|---------------|-----------|--|---------------|-----------|
| Acenaphthene | 0.2 | 8100 | Chloroform | 0.0005 | 8010 |
| | 0.01 | 8270 | | 0.005 | 8240 |
| | 0.02 | 8250 | p-Chloro-m-cresol | 0.005 | 8040 |
| Acetone | 0.1 | 8240 | | 0.02 | 8270 |
| Acetonitrile | 0.1 | 8015 | 2-Chlorophenol | 0.003 | 8040 |
| [Methyl cyanide] | 0.1 | 8030 | [o-Chlorophenol] | 0.01 | 8270 |
| Acetophenone | 0.001 | 8250 | m-Cresol | 0.01 | 8270 |
| | 0.01 | 8270 | o-Cresol | 0.01 | 8270 |
| Acrylamide | 0.005 | 8015 | p-Cresol | 0.01 | 8270 |
| Acrylonitrile | 0.005 | 8030 | DDD [Dichlorodiphenyl- dichloroethane] | 0.0001 | 8080 |
| [Vinyl cyanide] | 0.005 | 8240 | | 0.028 | 8250 |
| Anthracene | 0.2 | 8100 | | 0.01 | 8270 |
| | 0.02 | 8250 | DDE [Dichlorodiphenyl- ethylene] | 0.00004 | 8080 |
| | 0.01 | 8270 | | 0.056 | 8250 |
| Aniline | 0.01 | 8250 | | 0.01 | 8270 |
| [Benzyl amine] | 0.01 | 8270 | DDT [Dichlorodiphenyl- trichloroethane] | 0.0001 | 8080 |
| Antimony | 0.2 | 204 | | 0.047 | 8250 |
| | 0.3 | 6010 | | 0.01 | 8270 |
| | 2.0 | 7040 | Dibutyl phthalate | 0.005 | 8060 |
| | 0.03 | 7041 | | 0.01 | 8270 |
| | 2.0 | 7000A | 1,4-Dichlorobenzene | 0.004 | 8010 |
| Benzidine [Dianiline] | 0.44 | 8250 | | 0.003 | 8020 |
| Beryllium | ** | 210 | | 0.013 | 8120 |
| | 0.003 | 6010 | | 0.01 | 8270 |
| | 0.05 | 7090 | 3,3-Dichlorobenzidine | 0.02 | 8270 |
| | 0.002 | 7091 | | | |
| | 0.05 | 7000A | Dichlorodifluoromethane | 0.01 | 8010 |
| Bis(2-chloroethyl) ether | 0.057 | 8250 | | 0.005 | 8240 |
| [Dichloroethyl ether] | 0.01 | 8270 | 1,3-Dichloropropene | 0.003 | 8010 |
| Bis(2-ethylhexyl) | 0.02 | 8060 | | 0.005 | 8240 |
| phthalate | 0.25 | 8250 | 2,4-Dichlorophenol | 0.05 | 8040 |
| | 0.01 | 8270 | | 0.01 | 8270 |
| Bromodichloromethane | 0.001 | 8010 | Dieldrin | 0.00002 | 8080 |
| | 0.005 | 8240 | | 0.01 | 8270 |
| Bromomethane | 0.003 | 8010 | Diethyl phthalate | 0.005 | 8060 |
| [Methylbromide] | 0.01 | 8240 | | 0.01 | 8270 |
| Butylbenzyl phthalate | 0.005 | 8060 | Dimethoate | 0.02 | 8270 |
| [Benzylbutyl phthalate] | 0.025 | 8250 | 2,4-Dimethylphenol | 0.003 | 8040 |
| | 0.01 | 8270 | | 0.01 | 8270 |
| Carbon disulfide [CS ₂] | 0.005 | 8240 | 2,6-Dimethylphenol | ** | ** |

Appendix E—Class 1 Toxic Constituents

| Constituent | EQL (mg/l) | Method(s) | Constituent | EQL (mg/l) | Method(s) |
|---|---------------|-----------|-------------------------------|---------------|-----------|
| m-Dinitrobenzene | 0.01 | 8270 | 2-Methoxyethanol | ** | ** |
| 2,4-Dinitrophenol | 0.13 | 8040 | Methyl ethyl ketone [MEK] | 0.01 | 8015 |
| | 0.05 | 8270 | | 0.1 | 8240 |
| 2,4-Dinitrotoluene | 0.0002 | 8090 | Methyl isobutyl ketone [MIBK] | ** | 8015 |
| (and 2,6-, mixture) | 0.01 | 8270 | | 0.005 | 8240 |
| Dinoseb | 0.007 | 8150 | Methylene chloride | 0.005 | 8010 |
| | 0.02 | 8270 | [Dichloromethane] | 0.005 | 8240 |
| 1,4-Dioxane | 0.15 | 8015 | Methyl parathion | 0.0003 | 8140 |
| Dioxins (Polychlorinated dibenzo-p-dioxins) | | | | 0.01 | 8270 |
| 2,3,7,8-TCDD | 0.000005 | 8280 | Mirex | ** | ** |
| 1,2,3,7,8-PeCdd | 0.00001 | 8280 | Nickel | 0.04 | 249 |
| 1,2,3,4,7,8-HxCDD | 0.00001 | 8280 | | 0.05 | 6010 |
| 1,2,3,6,7,8-HxCDD | 0.00001 | 8280 | | 0.4 | 7520 |
| 1,2,3,7,8,9-HxCDD | 0.00001 | 8280 | | 0.04 | 7000A |
| Diphenylamine | 0.01 | 8270 | Nitrobenzene | 0.04 | 8090 |
| 1,2-Diphenylhydrazine | 0.2 | 1625 | | 0.01 | 8250 |
| Disulfoton | 0.002 | 8140 | | 0.01 | 8270 |
| | 0.01 | 8270 | N-Nitroso-di-n-butylamine | 0.01 | 8270 |
| Endosulfan | 0.0001 | 8080 | N-Nitrosodiphenylamine | 0.01 | 8270 |
| | 0.056 | 8250 | N-Nitrosomethylethylamine | 0.02 | 8270 |
| Endrin | 0.00006 | 8080 | N-Nitroso-n-propylamine | 0.01 | 8270 |
| | 0.01 | 8250 | N-Nitrosopyrrolidine | 0.01 | 8270 |
| 2-Ethoxyethanol | ** | ** | p-Phenylenediamine | 0.01 | 8270 |
| Ethylene dibromide [EDB] | 0.5 | 6231 | Parathion | 0.01 | 8270 |
| (Standard Methods for Examination | | | | 0.0003 | 8140 |
| of Water and Wastewater) | | | Pentachlorobenzene | 0.02 | 8270 |
| Ethylene glycol | ** | ** | Pentachloronitrobenzene | 0.01 | 8270 |
| Fluoranthene | 0.2 | 8100 | Phenol | 0.001 | 8040 |
| | 0.01 | 8270 | | 0.01 | 8270 |
| Fluorene | 0.2 | 8100 | Pronamide | 0.01 | 8270 |
| | 0.01 | 8270 | Pyrene | 0.2 | 8100 |
| Furans (Polychlorinated dibenzofurans) | | | | 0.01 | 8270 |
| 2,3,7,8-TCDF | 0.00001 | 8280 | Pyridine | 0.005 | 8240 |
| 1,2,3,7,8-PeCDF | 0.00001 | 8280 | | 0.01 | 8270 |
| 2,3,4,7,8-PeCDF | 0.00001 | 8280 | 1,1,1,2-Tetrachloroethane | 0.005 | 8010 |
| 1,2,3,4,7,8-HxCDF | 0.00001 | 8280 | | 0.005 | 8240 |
| 1,2,3,6,7,8-HxCDF | 0.00001 | 8280 | 1,1,2,2-Tetrachloroethane | 0.0003 | 8010 |
| 1,2,3,7,8,9-HxCDF | 0.00001 | 8280 | | 0.005 | 8240 |
| Hexachlorobenzene | 0.0005 | 8120 | 2,3,4,6-Tetrachlorophenol | 0.01 | 8270 |
| | 0.0 | 8270 | trans-1,3-Dichloropropene | 0.0034 | 8010 |
| Hexachloro-1,3-butadiene | 0.0034 | 8120 | | 0.005 | 8240 |
| | 0.01 | 8270 | Tribromomethane [Bromoform] | 0.002 | 8010 |
| Hexachlorocyclopentadiene | 0.004 | 8120 | | 0.005 | 8240 |
| | 0.01 | 8270 | 1,2,4-Trichlorobenzene | 0.01 | 8270 |
| Hexachloroethane | 0.0003 | 8120 | 1,1,2-Trichloroethane | 0.0002 | 8010 |
| | 0.01 | 8270 | [1,1,2-TCE] | 0.005 | 8240 |
| Hexachlorophene | 0.05 | 8270 | Trichlorofluoromethane | 0.01 | 8010 |
| Isobutyl alcohol | 0.05 | 8015 | [Freon 11] | 0.005 | 8240 |
| Isophorone | 0.06 | 8090 | 1,2,3-Trichloropropane | 0.01 | 8010 |
| | 0.01 | 8270 | | 0.005 | 8240 |
| Lindane | 0.00004 | 8080 | 2,4,5-Trichlorophenol | 0.01 | 8270 |
| | 0.01 | 8250 | 2,4,6-Trichlorophenol | 0.006 | 8040 |
| | 0.00004 | 608 | | 0.01 | 8270 |
| | 0.01 | 625 | Vanadium pentoxide | 0.2 | 286 |
| Methacrylonitrile | 0.005 | 8015 | | 0.08 | 6010 |
| Methomyl | 0.09 | 632 | | 2.0 | 7910 |
| | | | | 0.04 | 7911 |

* If o-, m-, and p-cresol concentrations cannot be differentiated, the total cresol concentration is used.

** This information not available at time of publication.

7-Day Distilled Water Leachate Test Procedure

30 TAC Chapter 335 Subchapter R Appendix 4)

Applicability: **Class 3 Waste Evaluations**

This test is intended only for dry, solid wastes, i.e., waste materials without any free liquids.

1. Place a 250 gram (dry weight) representative sample of the waste material in a 1500 milliliter Erlenmeyer flask.
2. Add 1 liter of deionized or distilled water into the flask and mechanically stir the material at a low speed for five (5) minutes.
3. Stopper the flask and allow to stand for seven (7) days.
4. At the end of seven (7) days, filter the supernatant solution through a 0.45 micron filter, collecting the supernatant into a separate flask.
5. Subject the filtered leachate to the appropriate analysis.

Form Codes

(30 TAC Chapter 335 Subchapter R Appendix 3)

Applicability: **All Waste**

In determining a waste stream's form code, it is recommended that the generator first determine into which major category the waste stream fits (e.g. inorganic liquids). The generator should then review all the form code descriptors in that category to determine which code or codes best describe the generator's waste stream. The generator should then choose, from the narrowed-down list, a form code for the waste stream.

Form codes are fairly generic in their descriptions. It is possible that more than one form code may be applicable to a particular waste stream. Generators should assign the form code which best describes the waste stream. If more than one form code can "best describe" the waste stream, then the generator should choose one of those several codes.

| Code | Waste Description | Code | Waste Description |
|---|---|--|---|
| Lab Packs | | | |
| Lab Packs — <i>Lab packs of mixed wastes, chemicals, lab wastes</i> | | 113 | Other aqueous waste with high dissolved solids |
| 001 | Lab packs of old chemicals only | 114 | Other aqueous waste with low dissolved solids |
| 002 | Lab packs of debris only | 115 | Scrubber water |
| 003 | Mixed lab packs | 116 | Leachate |
| 004 | Lab packs containing acute hazardous wastes | 117 | Waste liquid mercury |
| 009 | Other lab packs (Specify in Comments) | 119 | Other inorganic liquids (Specify in Comments) |
| Liquids | | 198 | Nonhazardous photographic chemical wastes (inorganic) |
| Inorganic Liquids — <i>Waste that is primarily inorganic and highly fluid (e.g., aqueous), with low suspended inorganic solids and low organic content</i> | | 199 | Brine solution that could also bear the form code 113 |
| 101 | Aqueous waste with low solvents | Organic Liquids — <i>Waste that is primarily organic and is highly fluid, with low inorganic solids content and low-to-moderate water content</i> | |
| 102 | Aqueous waste with low other toxic organics | 201 | Concentrated solvent-water solution |
| 103 | Spent acid with metals | 202 | Halogenated (e.g., chlorinated) solvent |
| 104 | Spent acid without metals | 203 | Non-halogenated solvent |
| 105 | Acidic aqueous waste | 204 | Halogenated/non-halogenated solvent mixture |
| 106 | Caustic solution with metals but no cyanides | 205 | Oil-water emulsion or mixture |
| 107 | Caustic solution with metals and cyanides | 206 | Waste oil |
| 108 | Caustic solution with cyanides but no metals | 207 | Concentrated aqueous solution of other organics |
| 109 | Spent caustic | 208 | Concentrated phenolics |
| 110 | Caustic aqueous waste | 209 | Organic paint, ink, lacquer, or vanish |
| 111 | Aqueous waste with reactive sulfides | 210 | Adhesives or epoxies |
| 112 | Aqueous waste with other reactives (e.g., explosives) | 211 | Paint thinner or petroleum distillates |

Appendix G—Form Codes

| Code | Waste Description | Code | Waste Description |
|--|---|--|---|
| 212 | Reactive or polymerizable organic liquids | 395 | Nonhazardous solids containing greater than or equal to (>) 500 ppm PCBs |
| 219 | Other organic liquids (Specify in Comments) | 396 | Nonhazardous electrical equipment/ devices containing greater than or equal to (>) 50ppm and less than (<) 500 ppm PCBs |
| 296 | Ethylene glycol based antifreeze | 397 | Nonhazardous electrical equipment/ devices containing greater than or equal to (>) 500 ppm PCBs |
| 297 | Nonhazardous liquids containing greater than or equal to (>) 50 and less than (<) 500 ppm PCBs | 398 | Nonhazardous soils containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs |
| 298 | Nonhazardous liquids containing greater than or equal to (>) 500 ppm PCBs | 399 | Nonhazardous soils containing greater than or equal to (>) 500 ppm PCBs |
| 299 | Nonhazardous photographic chemical waste (organic) | | |
| Solids <i>(These codes do not apply to pumpable waste.)</i> | | Organic Solids — Waste that is primarily organic and solid, with low-to-moderate inorganic content and water content; not pumpable | |
| | | Inorganic Solids — Waste that is primarily inorganic and solid, with low organic content and low-to-moderate water content; not pumpable | |
| 301 | Soil contaminated with organics | 401 | Halogenated pesticide solid |
| 302 | Soil contaminated with inorganics only | 402 | Non-halogenated pesticide solid |
| 303 | Ash, slag, or other residue from incineration of wastes | 403 | Solids resins or polymerized organics |
| 304 | Other "dry" ash, slag, or thermal residue | 404 | Spent carbon |
| 305 | "Dry" lime or metal hydroxide solids chemically "fixed" | 405 | Reactive organic solid |
| 306 | "Dry" lime or metal hydroxide solids not "fixed" | 406 | Empty fiber or plastic containers |
| 307 | Metal scale, filings, or scrap | 407 | Other halogenated organic solids (Specify in Comments) |
| 308 | Empty or crushed metal drums or containers | 409 | Other non-halogenated organic solids (Specify in Comments) |
| 309 | Batteries or battery parts, casings, cores | 488 | Wood debris |
| 310 | Spent solid filters or adsorbents | 489 | Petroleum contaminated solids |
| 311 | Asbestos solids and debris | 490 | Sand blasting waste |
| 312 | Metal-cyanide salts/chemicals | 491 | Dewatered biological treatment sludge |
| 313 | Reactive cyanide salts/chemicals | 492 | Dewatered sewage or other untreated biological sludge |
| 314 | Reactive sulfide salts/chemicals | 493 | Catalyst waste |
| 315 | Other reactive salts/chemicals | 494 | Solids containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs |
| 316 | Other metal salts/chemicals | 495 | Solids containing greater than or equal to (>) 500 ppm PCBs |
| 319 | Other waste inorganic solids (Specify in Comments) | 496 | Electrical equipment/devices containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs |
| 388 | Empty or crushed glass containers | 497 | Electrical equipment/devices containing greater than or equal to (>) 500 ppm PCBs |
| 389 | Nonhazardous sandblasting waste | 498 | Soil containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs |
| 390 | Nonhazardous concrete/cement/ construction debris | 499 | Soils containing greater than or equal to (>) 500 ppm PCBs |
| 391 | Nonhazardous dewatered wastewater treatment sludge | | |
| 392 | Nonhazardous dewatered air pollution control device sludge | | |
| 393 | Catalyst waste | | |
| 394 | Nonhazardous solids containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs | | |

Appendix G—Form Codes

| Code | Waste Description | Code | Waste Description |
|---|--|---|-------------------|
| <p style="text-align: center;">Sludges (These codes only apply to pumpable waste.)</p> <p>Inorganic Sludges — Waste that is primarily inorganic, with moderate-to-high water content and low organic content, and pumpable</p> | | <p>695 Petroleum contaminated sludges other than still bottoms and oily sludges</p> <p>696 Grease</p> <p>697 Catalyst waste</p> <p>698 Nonhazardous sludges containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs</p> <p>699 Nonhazardous sludges containing greater than or equal to (>) 500 ppm PCBs</p> | |
| 501 | Lime sludge without metals | <p style="text-align: center;">Gases</p> <p>Inorganic Gases — Waste that is primarily inorganic with a low organic content and is a gas at atmospheric pressure</p> | |
| 502 | Lime sludge with metals/metal hydroxide sludge | | |
| 503 | Wastewater treatment sludge with toxic organics | <p>701 Inorganic gases</p> <p>Organic Gases — Waste that is primarily organic with low-to-moderate inorganic content and is a gas at atmospheric pressure</p> | |
| 504 | Other wastewater treatment sludge | | |
| 505 | Untreated plating sludge without cyanides | <p>801 Organic gases</p> <p style="text-align: center;">Plant Trash</p> | |
| 506 | Untreated plating sludge with cyanides | | |
| 507 | Other sludge with cyanides | <p>(In order to be considered for one of the two plant refuse designations, a waste must first meet the following two criteria.</p> <p>First, the waste must be a Class 2 waste. This means that a proper classification determination must be performed for each item which a facility is considering as one of the plant refuse designations. A waste is not a Class 2 solely because it has been designated as a plant refuse waste. Hazardous and Class 1 wastes are not eligible for designation as one of the plant refuses.</p> <p>Second, the waste must meet the particular definition of the plant refuse term. For more information on these terms, please refer to the terms listed in this table as well as the "Definitions" section which follows this table.)</p> | |
| 508 | Sludge with reactive sulfides | | |
| 509 | Sludge with other reactives | <p>902 Supplemental plant production refuse — any Class 2 waste from production, manufacturing, or laboratory operations as long as the total amount of the supplemental plant production refuse does not exceed twenty percent of the total plant trash (form code 999) volume or weight, whichever is less — this could include, but is not limited to, such things as metal parts, floor sweepings, and off-specification materials</p> | |
| 510 | Degreasing sludge with metal scale or filings | | |
| 511 | Air pollution control device sludge (e.g., fly ash, wet scrubber sludge) | <p>999 Plant Trash — any Class 2 waste originating in the facility offices, laboratory, plant production area or food services/cafeteria operations that is composed of paper, cardboard,</p> | |
| 512 | Sediment or lagoon dragout contaminated with organics | | |
| 513 | Sediment or lagoon dragout contaminated with inorganics only | | |
| 514 | Drilling mud | | |
| 515 | Asbestos slurry or sludge | | |
| 516 | Chloride or other brine sludge | | |
| 519 | Other inorganic sludges (Specify in Comments) | | |
| 597 | Catalyst waste | | |
| 598 | Nonhazardous sludges containing greater than or equal to (>) 50 ppm and less than (<) 500 ppm PCBs | | |
| 599 | Nonhazardous sludges containing greater than or equal to (>) 500 ppm PCBs | | |
| <p>Organic Sludges — Waste that is primarily organic with low-to-moderate inorganic solids content and water content, and pumpable</p> | | | |
| 601 | Still bottoms of halogenated (e.g., chlorinated) solvents or other organic liquids | | |
| 602 | Still bottoms on non-halogenated solvents or other organic liquids | | |
| 603 | Oily sludge | | |
| 604 | Organic paint or ink sludge | | |
| 605 | Reactive or polymerizable organics | | |
| 606 | Resins, tars, or tarry sludge | | |
| 607 | Biological treatment sludge | | |
| 608 | Sewage or other untreated biological sludge | | |
| 609 | Other organic sludges (Specify in Comments) | | |

Appendix G—Form Codes

| Code | Waste Description | Code | Waste Description |
|------|--|------|--|
| | linings, wrappings, paper and/or wooden packaging materials, uncontaminated food wastes and/or packaging, cafeteria wastes, glass, aluminum foil, aluminum cans, aluminum scrap, stainless steel, steel, iron scrap, plastics, styrofoam, rope, twine, uncontaminated rubber, uncontaminated wooden materials, equipment belts, wirings, | | uncontaminated cloth, metal bindings, empty containers with a holding capacity of less than five gallons, uncontaminated floor sweepings, and personal cosmetics generated by facility personnel (does not include cosmetics generated as a result of manufacturing or plant production operations). |

Form Code Definitions

The following are definitions of terms utilized in form codes:

Acidic – A material having a pH less than 7.0.

Alkaline – A material having a pH greater than 7.0.

Aqueous – A water solution containing organic and/or inorganic constituents dissolved in solution.

Caustic – A material which is corrosive or irritating to living tissue and has a pH greater than 7.

Inorganic – Chemicals that are not organic (i.e., water, carbon dioxide, carbon disulfide, iron, zinc, steel). Generally, if a waste is composed of more than 50% inorganic materials, it is considered an inorganic waste.

Organic – Chemicals composed primarily of carbon and hydrogen and their derivatives. (i.e. methylene chloride, benzene, petroleum products). In general, if a waste is composed of 50% or more organic materials, it is considered an organic waste.

Plant Trash – Includes the following Class 2 wastes which are produced as a result of plant production, manufacturing, laboratory, general office, cafeteria or food service operations; paper, cardboard, linings, wrappings, paper or wood packaging materials, food wastes, cafeteria wastes, glass, aluminum foil, aluminum cans, aluminum scrap, stainless steel, steel, iron scrap, plastics, styrofoam, rope, twine, uncontaminated rubber, uncontaminated wooden materials, equipment belts, wirings, uncontaminated cloth, metal bindings, empty containers with a holding capacity of less than five gallons, uncontaminated floor sweepings, and personal cosmetics generated by facility personnel (does not include cosmetics generated as a result of manufacturing or plant production operations). **Please note that hazardous waste and Class 1 waste can not be designated as “plant office refuse”.** Plant trash shall not include oils, lubricants of any type, oil filters, contaminated soils, sludges, or wastewaters.

Examples of “plant trash” include Class 2 soda cans, lunch sacks, food scraps, envelopes, plastic binders, empty boxes, pallets, styrofoam shipping boxes, chemical container liners, shrink wrap, and broken glassware.

As another example, used typing paper from the secretarial area could be considered “plant trash” because it resulted from general office operations. (Please note that typing paper would normally be considered a Class 2 waste unless it were contaminated with something to cause it to be considered a hazardous or Class 1 waste. For example, if typing paper were used to clean up a spill of a F003 waste, it would be considered a hazardous waste.)

As another example, a Class 2 off-specification production chemical could not be considered “plant trash” because it does not meet the definition of a “plant trash”. However, the Class 2 off-specification production chemical might be considered a “supplemental plant production refuse” as long as the weight/volume limits established for “supplemental plant production refuse” were not exceeded. (For more information on “supplemental plant production refuse” and weight/volume limits, please see “Supplemental Plant Production Refuse” in these definitions.

Reactive – A material is reactive if it is capable of detonation or explosive decomposition:

1. at standard temperature and pressure, or
2. if subjected to a strong ignition source, or
3. heated under confinement.

A material is also considered reactive if, when mixed with water it is:

1. potentially explosive, or
2. reacts violently, or
3. generates toxic gases or vapors (i.e. hydrogencyanide or hydrogensulfide).

Form Code Definitions

A material is also considered reactive if it is:

1. normally unstable and readily undergoes violent changes, or
2. a forbidden explosive (see 49 CFR §173.53), or
3. a Class B explosive (see 49 CFR §173.88).

Solvent – A liquid used to dissolve another material.

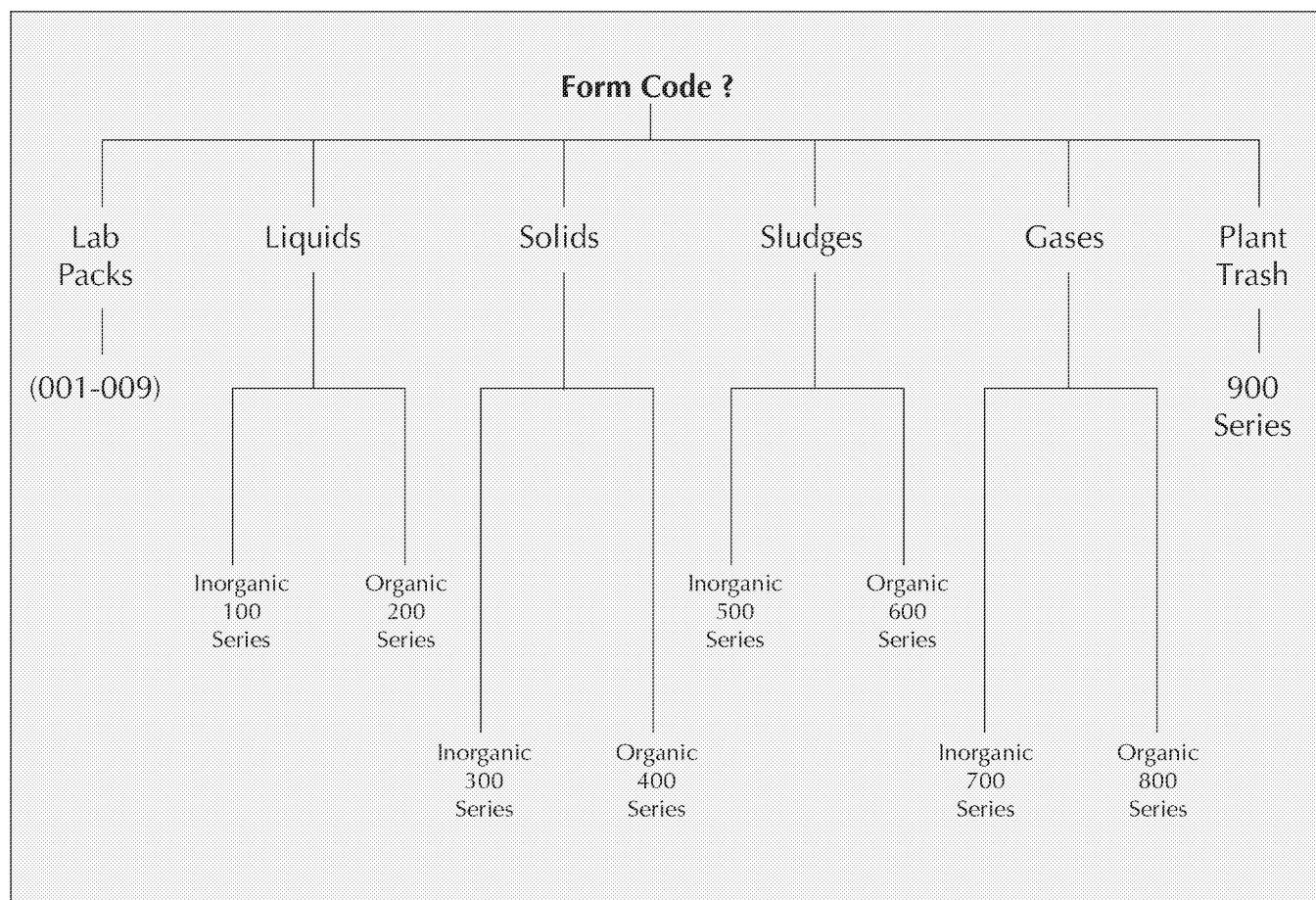
Supplemental Plant Production Refuse – Any **Class 2 Waste from production, manufacturing, or laboratory operations** can be designated as “supplemental plant production refuse” (form code 999) as long as the total amount of the supplemental plant production refuse **does not exceed twenty percent of the total plant production refuse volume or weight, whichever is less.**

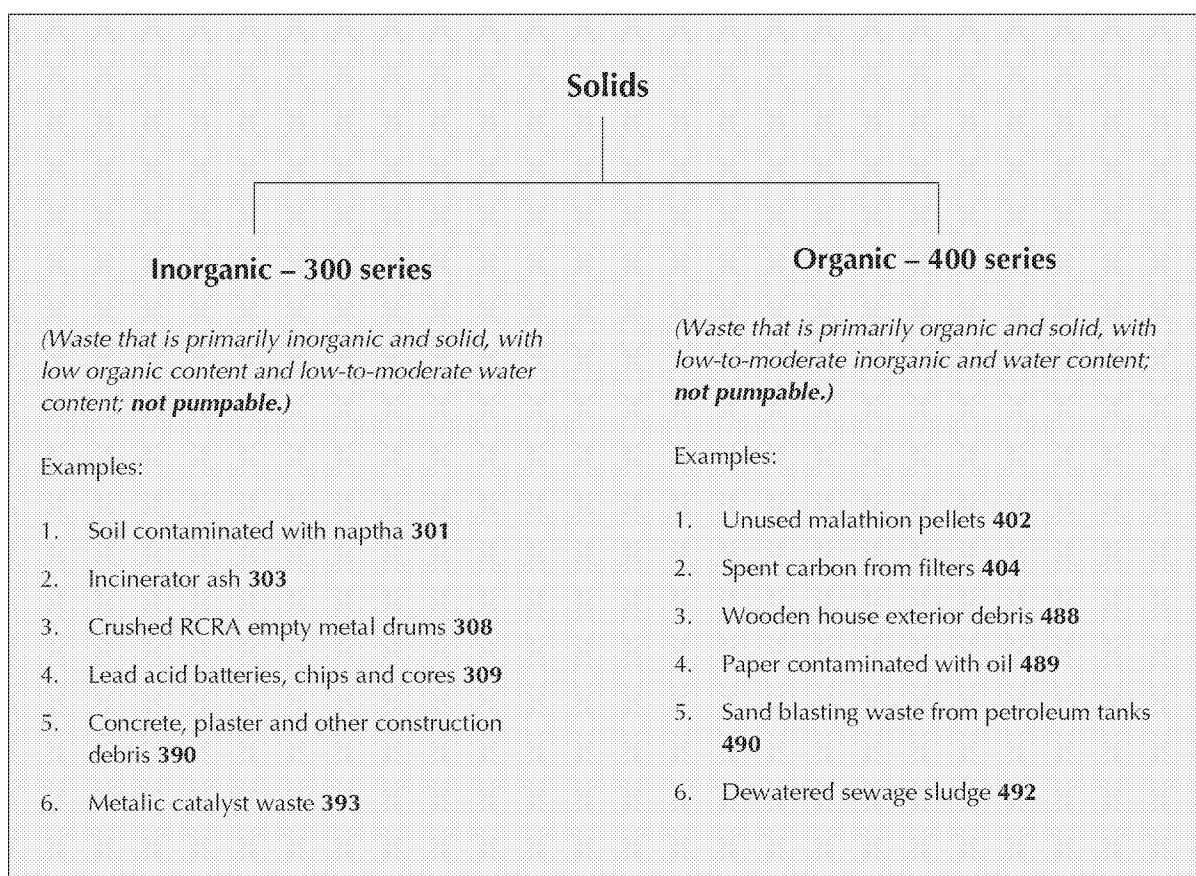
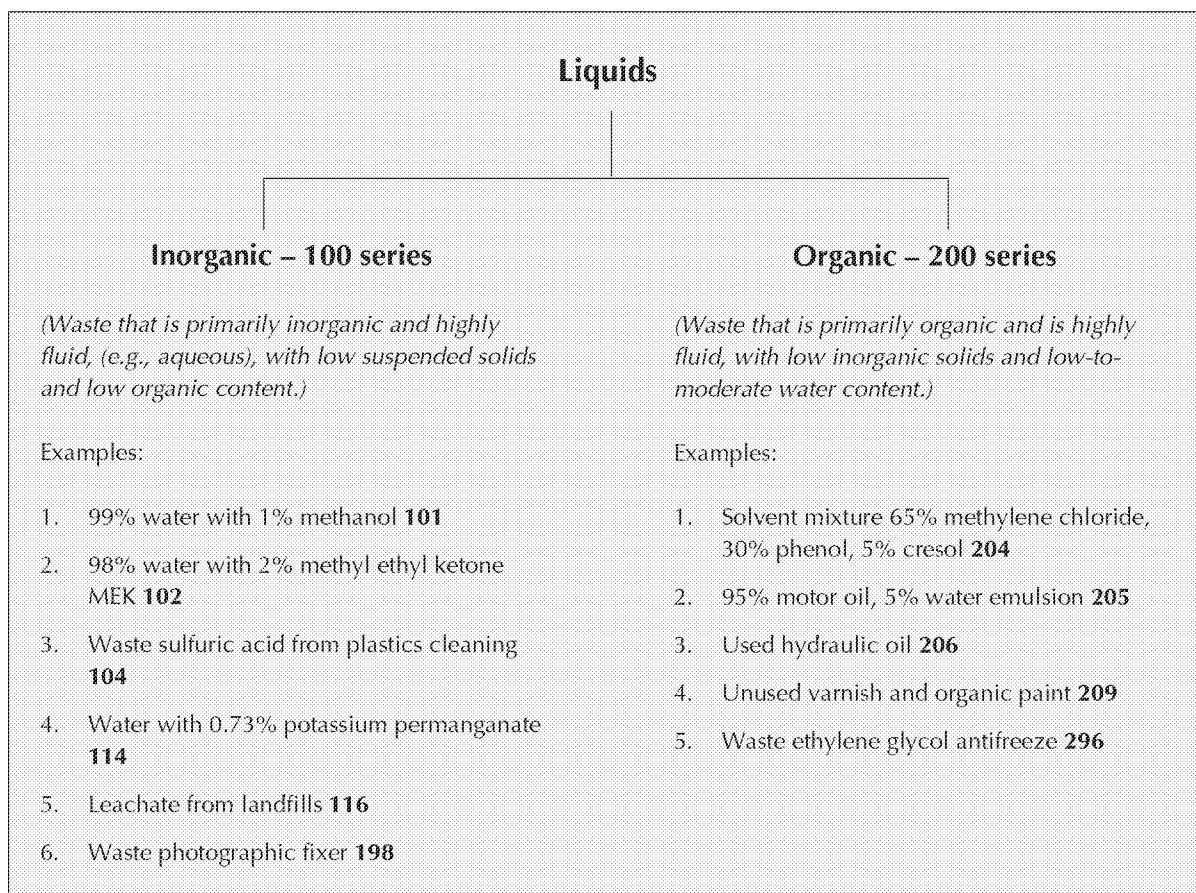
Individual wastes which have been designated “supplemental plant production refuse” may be designated by the generator at a later time as a separate waste in order to maintain the “supplemental plant production refuse” at a level below 20% of the “plant trash” amount. For any waste stream so redesignated, the generator must provide the initial notification information required pursuant to 30 TAC Chapter 335.

Please note that hazardous waste and Class 1 waste can not be designated as “supplemental plant production refuse”.

Examples of “supplemental plant production refuse” include Class 2 steel shavings, empty metal containers, aerosol cans, old chemicals, safety equipment, and machine parts.

Please note that when a site notifies the Commission that it generates “supplemental plant production refuse”, it must include a list of those wastes which are expected to be included in the “supplemental plant production refuse” designation. If that list increases, the generator must notify the Commission of the additions to that list; otherwise, the Commission will not view the additions as “supplemental plant production refuse”.





Appendix G—Form Codes

| Sludges | |
|--|--|
| Inorganic – 500 series | Organic – 600 series |
| <i>(Waste that is primarily inorganic, with moderate-to-high water content, and low organic content, and pumpable.)</i> | <i>(Waste that is primarily organic, with moderate-to-high water content, and low inorganic content, and pumpable.)</i> |
| Examples: | Examples: |
| <ol style="list-style-type: none"> 1. Wastewater treatment sludge containing phenolics 503 2. Zinc plating wastewater sludge containing cyanide 506 3. Sludge from pollution removal scrubber 511 4. Sediment pond dragout contaminated with lead 513 5. Water based drilling mud with brine 514 6. Waste metal catalyst with 0.89% organics 597 | <ol style="list-style-type: none"> 1. Still bottoms from naptha recovery 602 2. Ink and paint sludge from printing billboards 604 3. Bioremediation sludge from oil spill cleanup 607 4. Motor repair facility sludge with grease 603 5. Refinery wastewater sludge with petroleum compounds 695 6. Waste lubricating grease 696 |

| Lab Packs – 001-009 series | Plant Trash – 900 series |
|--|--|
| Examples: | Examples: |
| <ol style="list-style-type: none"> 1. Lab pack containing debris 002 2. Lab pack containing old unused or partially used chemicals 001 | <ol style="list-style-type: none"> 1. Office debris (i.e., paper, plastic, alluminum cans and fax paper) 999 2. Scrap plastic from molds of toys and souvenirs 902 3. Packing debris from unpacking of raw materials 999 |

Codes for Out-of-State Waste Generators and Receivers

| Codes for States of the United States | | | | Country Codes (in Order of Assigned Numbers) | | |
|--|--------------|---------------|--------------|---|---------------|--------------|
| State or Country | Abbreviation | Generator No. | Receiver No. | State or Country | Generator No. | Receiver No. |
| Alabama | AL | D0001 | D0001 | Navajo Nation | D0057 | D0057 |
| Alaska | AK | D0002 | D0002 | Puerto Rico | D0060 | D0060 |
| Arizona | AZ | D0004 | D0004 | Virgin Islands | D0066 | D0066 |
| Arkansas | AR | D0005 | D0005 | Guam | D0075 | D0075 |
| California | CA | D0006 | D0006 | American Samoa | D0083 | D0083 |
| Colorado | CO | D0008 | D0008 | Mexico | F0061 | F0061 |
| Connecticut | CT | D0009 | D0009 | Japan | F0062 | F0062 |
| Delaware | DE | D0010 | D0010 | Canada | F0063 | F0063 |
| Dist. of Columbia | | D0011 | D0011 | England | F0064 | F0064 |
| Florida | FL | D0012 | D0012 | Spain | F0065 | F0065 |
| Georgia | GA | D0013 | D0013 | Denmark | F0067 | F0067 |
| Hawaii | HI | D0015 | D0015 | Germany | F0068 | F0068 |
| Idaho | ID | D0016 | D0016 | Belgium | F0069 | F0069 |
| Illinois | IL | D0017 | D0017 | Finland | F0070 | F0070 |
| Indiana | IN | D0018 | D0018 | Netherlands | F0071 | F0071 |
| Iowa | IA | D0019 | D0019 | Pacific Islands | F0072 | F0072 |
| Kansas | KS | D0020 | D0020 | Venezuela | F0073 | F0073 |
| Kentucky | KY | D0021 | D0021 | Marshall Islands | F0074 | F0074 |
| Louisiana | LA | D0022 | D0022 | France | F0076 | F0076 |
| Maine | ME | D0023 | D0023 | Malaysia | F0077 | F0077 |
| Maryland | MD | D0024 | D0024 | Austria | F0078 | F0078 |
| Massachusetts | MA | D0025 | D0025 | Holland | F0079 | F0079 |
| Michigan | MI | D0026 | D0026 | Hong Kong | F0080 | F0080 |
| Minnesota | MN | D0027 | D0027 | Norway | F0081 | F0081 |
| Mississippi | MS | D0028 | D0028 | Panama | F0082 | F0082 |
| Missouri | MO | D0029 | D0029 | Greece | F0084 | F0084 |
| Montana | MT | D0030 | D0030 | Peru | F0085 | F0085 |
| Nebraska | NE | D0031 | D0031 | Brazil | F0086 | F0086 |
| Nevada | NV | D0032 | D0032 | Offshore beyond 12 mi. | F0087 | F0087 |
| New Hampshire | NH | D0033 | D0033 | Saudi Arabia | F0088 | F0088 |
| New Jersey | NJ | D0034 | D0034 | Jamaica | F0089 | F0089 |
| New Mexico | NM | D0035 | D0035 | Italy | F0090 | F0090 |
| New York | NY | D0036 | D0036 | Belize | F0091 | F0091 |
| North Carolina | NC | D0037 | D0037 | Luxemburg | F0092 | F0092 |
| North Dakota | ND | D0038 | D0038 | Haiti | F0093 | F0093 |
| Ohio | OH | D0039 | D0039 | Nicaragua | F0094 | F0094 |
| Oklahoma | OK | D0040 | D0040 | Australia | F0095 | F0095 |
| Oregon | OR | D0041 | D0041 | Sweden | F0096 | F0096 |
| Pennsylvania | PA | D0042 | D0042 | El Salvador | F0097 | F0097 |
| Rhode Island | RI | D0044 | D0044 | Trinidad de Tobago | F0098 | F0098 |
| South Carolina | SC | D0045 | D0045 | Taiwan | F0099 | F0099 |
| South Dakota | SD | D0046 | D0046 | Cambodia | F0001 | F0001 |
| Tennessee | TN | D0047 | D0047 | Bahamas Islands | F0002 | F0002 |
| Utah | UT | D0049 | D0049 | Columbia | F0003 | F0003 |
| Vermont | VT | D0050 | D0050 | South Africa | F0004 | F0004 |
| Virginia | VA | D0051 | D0051 | China | F0005 | F0005 |
| Washington | WA | D0053 | D0053 | India | F0006 | F0006 |
| West Virginia | WV | D0054 | D0054 | Chile | F0007 | F0007 |
| Wisconsin | WI | D0055 | D0055 | Thailand | F0008 | F0008 |
| Wyoming | WY | D0056 | D0056 | Slovenia | F0009 | F0009 |
| | | | | Netherlands Antilles (A,B,C) | F0010 | F0010 |
| | | | | Honduras | F0011 | F0011 |